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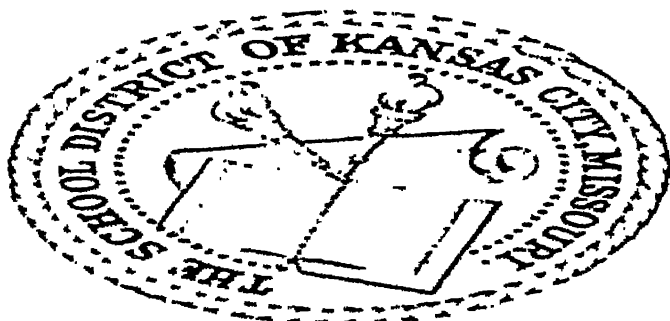
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# INDUSTRIAL ARTS INDEX

THIRD ANNUAL CUMULATION

SUBJECT INDEX TO A SELECTED LIST OF ENGINEERING  
AND TRADE PERIODICALS FOR 1915

EDITED BY

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# Industrial Arts Index

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With this issue the Industrial Arts Index completes its third year. Although it is the annual volume for 1915 it indexes most of the magazines for December 1914 and only a few for December 1915. The Proceedings of the American Gas Institute, Journal of the Boston Society of Civil Engineers, Journal of the Institution of Electrical Engineers and The University of Minnesota Studies in Engineering have been added this year.

There have been many suggestions for further additions to the list of periodicals indexed. Among these are the Bulletin of the American Railway Engineering Association; Canadian Mining Institute Quarterly Bulletin; Gas Age; Gas World (London); Journal of Electricity, Power and Gas; Journal of Gas Lighting (London); London Times (Engineering Supplement); Mining and Engineering World; Mining Press; Proceedings of the Electric Light Association; Printer's Ink; Printing Art; Bulletin of the Society of Automobile Engineers; Technology Monthly and Harvard Engineering Journal; American Lumberman.

Any of our subscribers who may be interested in having one or more of these periodicals indexed are asked to send us their votes. Any suggestions as to other additions or improvements will also be carefully considered.

There are several other periodicals which would be indexed in the Industrial Arts Index if the publishers were willing to furnish us copies for the purpose. It is for this reason that Ice and Refrigeration, Electric Journal, American Machinist, and Proceedings of the American Society of Civil Engineers are not included.

## National Preparedness and Military Training

A new aid to the many who are discussing "preparedness" is the Abridged Debaters' Handbook on military training, just published by The H. W. Wilson Company (25c.). This covers the question of military training in schools and colleges, gives a list of organizations working for or against national defense, a brief, six pages of bibliography, and fifty-five pages of excerpts on both sides of the question. National Defense, one of the titles in the Debaters' Handbook series, price \$1.00, should be used to supplement the one on military training, if fuller information as to the present strength of our national defenses is desired.

A larger handbook on military training, in the regular series, will be issued as soon as the amount of valuable new material seems to warrant it. This handbook will include the question of compulsory military service.

## Notes and Announcements

The Civil Engineers' Society of St. Paul began in November the publication of a monthly bulletin. This publication "is for the purpose of giving to the society an organ through which it may advocate a better understanding of the engineering profession in relation to the public welfare."

The Journal of the Association of Engineering Societies will be discontinued with the December, 1915, issue, owing to the disbanding of the Association on December 31, 1915. The Engineers' Club of St. Louis, the largest society in the Association and its active head for the past two years, will begin the publication of a bi-monthly journal to be known as the Journal of the Engineers' Club of St. Louis.

The Associated Technical Men, an association formed in 1914 for the purpose of furthering the interests of technical men, has commenced the publication of a monthly bul-

## NOTES AND ANNOUNCEMENTS

letin to keep all members of the society informed as to its progress and to acquaint non-members with the work it is doing. A. M. Wolf, 180 North Dearborn Street, Chicago, is editor of the publication.

The first number of the Utilities Magazine was published in July, 1915. This is the official organ of the Utilities Bureau, which grew out of the conference of American mayors on public policies as to municipal utilities, held in Philadelphia, in November, 1914. In November, 1915, a Valuation Conference under the auspices of this bureau was held in Philadelphia, seven sessions being held. The proceedings of the conference will be made available in the January issue of the Utilities Magazine.

The Rhode Island Highway News, the first number of which was issued in September, 1915, is a publication of the State Board of Public Roads, and is similar to those which are issued by the highway authorities of several other states. It contains short articles on the maintenance of bituminous macadam and water bound macadam roads, a description of the business methods in the office of the board and discussions of various phases of construction and maintenance work.

There were no numbers of the Journal of the Institution of Electrical Engineers published between the issues of June 15 and Dec. 1.

The first issue of the new quarterly Bulletin of the National District Heating Association has made its appearance, being dated October, 1915. The bulletin is of standard magazine size. Under the committee heading, it is stated that the station operating committee will take up, among other things, the subjects of (1) oil as a fuel; (2) bleeder type of turbo-generator, and (3) operating data relative to a certain heating plant on which accurate information will be obtained by the committee through tests made by one of the member companies.

The Textile World Record, published by the Lord & Nagle Company, and the Textile Man-

ufacturers Journal, published by J. H. Bragdon & Company, have been consolidated to form a new publication known as the Textile World Journal. This is issued weekly, combining the news and market report features, which have been a specialty of the Textile Manufacturers Journal, and the technical machinery and special features of the Textile World Record. The Bragdon, Lord & Nagle Company, Incorporated, publish the Textile World Journal at their publication office, 377 Broadway, New York.

The Railway Electrical Engineer, which has been published by the Wray Publishing Company, at Chicago, has been bought by the Simmons-Boardman Publishing Company, the publisher of the Railway Age Gazette, and the Signal Engineer. Beginning with November it will be published by the Simmons-Boardman Publishing Company from its New York office. It will not be consolidated with any of the other periodicals of this company, but will be continued as a separate monthly publication.

The Colliery Engineer, formerly published by the International Textbook Company, at Scranton, Pennsylvania, has been purchased by the Hill Publishing Company, and was consolidated with the Coal Age in November. The latter periodical will be added to the list of those indexed in the Industrial Arts Index.

Among the magazines suggested for indexing in the Industrial Arts Index is the Mining and Engineering World, published in Chicago. The weekly issues of this magazine contain the titles of articles on mining, metallurgy and geology appearing in American and foreign periodicals. These are cumulated in semi-annual volumes, and published as the Mining World Index of Current Literature. Some four hundred periodicals are indexed, also publications of schools, societies, and government bureaus, and new books. The index has a classified arrangement, and, in many cases, a brief annotation follows the title. The seventh volume, covering January to June, 1915, has recently been published.

# List of Periodicals Indexed

- Am Chem Soc J**—Journal of the American Chemical Society. \$6. Charles L. Parsons, sec., Box 505, Washington, D. C.
- Am Eng**—American Engineer. See Ry Age (Mech ed).
- Am For**—American Forestry. \$3; single numbers 25c. American Forestry Assn., 1410 H St, N. W., Washington, D. C.
- Am Gas Inst Pro**—Proceedings of the American Gas Institute, ninth annual meeting, 1914. \$7.50 to libraries. American Gas Institute, 29 W 39th St, New York.
- Am Gas Light J**—American Gas Light Journal. \$3; single numbers 10c. American Gas Light Journal, 42 Pine St, New York.
- Am Ind**—American Industries. \$1; single numbers 10c. National Manufacturers Co., 30 Church St, New York.
- Am Inst Arch J**—Journal of the American Institute of Architects. \$5; single numbers 50c. American Institute of Architects, The Octagon, Washington, D. C.
- Am Inst E E Pro**—American Institute of Electrical Engineers. Proceedings. \$10; single numbers \$1. F. L. Hutchinson, sec., 33 W 39th St, New York.
- Am Inst Min E Bul**—Bulletin of the American Institute of Mining Engineers, subs. \$10; single numbers \$1; to members, public libraries, and educational institutions, \$5; single numbers 50c. B. Stoughton, sec., 29 W 39th St, New York.
- Am Soc Heat & V E**—Transactions of the American Society of Heating and Ventilating Engineers. American Society of Heating and Ventilating Engineers, 29 W 39th St, New York.
- Am Soc M E J**—Journal of the American Society of Mechanical Engineers. \$3; single numbers 35c. American Society of Mechanical Engineers, 29 W 39th St, New York.
- Am Water Works Assn J**—Journal of the American Water Works Association. American Water Works Assn., 2419 Greenmount Av, Baltimore, Md.
- Arch & Bldg**—Architecture and Building. \$2; single numbers 30c. William T. Comstock Co., 23 Warren St, New York.
- Arch Rec**—Architectural Record. \$3; single numbers 35c. Architectural Record Co., 115 W 40th St, New York.
- Assn Eng Soc J**—Journal of the Association of Engineering Societies. \$3; single numbers 30c. Association of Engineering Societies, J. W. Peters, sec., 3817 Olive St, St. Louis, Mo.
- Automobile**—Automobile. \$3; single numbers 10c. Glass Journal Co., 231 W 39th St, New York.
- Bldg Age**—Building Age. \$2; single numbers 30c. David Williams Co., 239 W 39th St, New York.
- Boston Soc C E J**—Journal of the Boston Society of Civil Engineers. \$4 (ten numbers); single numbers 50c. Boston Society of Civil Engineers, 715 Tremont Temple, Boston.
- Bricks**—Brickbuilder. \$5; single numbers 50c. Rogers & Manson Co., 85 Water St, Boston.
- Colliery**—Colliery Engineer. \$2; single numbers 25c. Hill Pub Co., 10th Av at 36th St, New York.
- Consolidated with Coal Age on Nov. 8.
- Concrete Cem**—Concrete-Cement Age. \$1.50; single numbers 15c. Concrete-Cement Age Pub. Co., 97 West Fort St, Detroit, Mich.
- Dom Eng**—Domestic Engineering. \$2; single numbers 10c. Domestic Engineering Co., 445-447 Plymouth Court, Chicago.
- Econ Geol**—Economic Geology. \$3; single numbers 50c. Economic Geology Pub. Co., 41 North Queen St, Lancaster, Pa.
- Elec Ry J**—Electric Railway Journal. \$3; single numbers 10c. McGraw Pub. Co., 239 W 39th St, New York.
- Elec R & W Elec'n**—Electrical Review and Western Electrician. \$3; single numbers 10c. Electrical Review Pub. Co., 608 S Dearborn St, Chicago.
- Elec W**—Electrical World. \$3 single numbers 10c. McGraw Pub Co., 239 W. 39th St, New York.
- Engineer**—Engineer. Thick paper ed \$2 6d; Canadian subs \$1 16s; thin paper ed \$1 16s; Canadian subs \$1 11s 6d. Engineer, 33 Norfolk St, Strand, London, W. C.
- Eng & Contr**—Engineering and Contracting. \$2. Myron C. Clark Pub. Co., 608 S Dearborn St, Chicago.
- Eng & Min J**—Engineering and Mining Journal. \$5; single numbers 15c. Hill Pub. Co., 10th Av at 36th St, New York.
- Eng M**—Engineering Magazine. \$3; single numbers 25c. Engineering Magazine Co., 140 Nassau St, New York.
- Eng N**—Engineering News. \$5; single numbers 15c. Hill Pub. Co., 10th Av at 36th St, New York.
- Eng Rec**—Engineering Record. \$3; single numbers 10c. McGraw Pub. Co., 239 W 39th St, New York.
- Eng Soc W Pa**—Proceedings of the Engineers' Society of Western Pennsylvania. \$5; single numbers 50c. Engineers' Society of Western Pennsylvania, 2511 Oliver Bldg, Pittsburgh, Pa.
- Foundry**—Foundry. \$1; single numbers 15c. Penton Pub. Co., Penton Bldg, Cleveland, O.
- Gen Elec R**—General Electric Review. \$2; single numbers 20c. General Electric Co., Schenectady, N. Y.
- Good Roads n s**—Good Roads new series. \$2; single numbers 5c except first numbers of each month 10c. E. L. Powers Co., 180 Nassau St, New York.
- Heat & Ven**—Heating and Ventilating Magazine. \$1; single numbers 10c. Heating & Ventilating Magazine Co., 1123 Broadway, New York.
- Horseless Age**—Horseless Age. \$2; single numbers 10c. Horseless Age Co., 440 4th Av, New York.
- Ill U Eng Exp Sta Bul**—Illinois University Engineering Experiment Station. Bulletin. Univ. of Ill., Urbana.
- Illum Engr**—Illuminating Engineer. 10s 6d; single numbers 1s. Illuminating Engineering Pub. Co., 32 Victoria St, London, S. W.
- Illum Eng Soc**—Transactions of the Illuminating Engineering Society. \$5; single numbers 75c. Illuminating Engineering Soc., 29 W 39th St, New York.
- Ind Eng**—Industrial Engineering and Engineering Digest. \$2; single numbers 20c. Technical Literature Co., 120 W 32d St, New York.
- Inland Prt**—Inland Printer. \$3; single numbers 30c. Inland Printer Co., 632 Sherman St, Chicago.
- Inst E E J**—Journal of the Institution of Electrical Engineers. single numbers 3s 6d. 1s. & R. N. Spon, Ltd., 57 Haymarket, London, E. W.; Spon & Chamberlain, 123 Liberty St, New York.
- Int Marine Eng**—International Marine Engineering. \$2. Aldrich Pub. Co., 17 Battery Place, New York.
- Iron Age**—Iron Age. \$5; single numbers 20c. David Williams Co., 239 W 39th St, New York.
- Iron Tr R**—Iron Trade Review. \$4; single numbers 15c. Penton Pub. Co., Penton Bldg., Cleveland, O.

# LIST OF PERIODICALS INDEXED

- J Account**—Journal of Accountancy. \$3; single numbers 30c. Ronald Press Co., 20 Vesey St, New York.
- J Fr Inst**—Journal of the Franklin Institute. \$5; single numbers 50c. Franklin Institute, Philadelphia.
- J Ind & Eng Chem**—Journal of Industrial and Engineering Chemistry. \$6. American Chemical Society, Boston, Pa.
- Locomotive**—Locomotive. 50c; single numbers gratis; recent bound volumes \$1. Hartford Steam Boiler Inspection & Insurance Co., Hartford, Conn.
- Mach**—Machinery. Engineering edition \$2; coated pa. \$2.50; single numbers 20c. Industrial Press, 140 Lafayette St, New York.
- Met & Chem Eng**—Metallurgical and Chemical Engineering. \$3; single numbers 25c. McGraw Pub. Co., 239 W 39th St, New York.
- Metal Ind n s**—Metal Industry new series. \$1; single numbers 10c. Metal Industry, 99 John St, New York.
- Metal Work**—Metal Worker, Plumber & Steam Fitter. \$2; single numbers 10c. David Williams Co., 239 W 39th St, New York.
- Minn U Bul**—University of Minnesota. Studies in engineering. Univ. of Minn., Minneapolis.
- Munic Eng**—Municipal Engineering. \$2; single numbers 25c. Engineering Pub. Co., 702 Wabash Bldg, Indianapolis, Ind.
- Munic J**—Municipal Journal. \$3; single numbers 10c; special numbers 25c. Municipal Journal and Engineer, Inc., 59 Union Square, New York.
- Power**—Power. \$2; single numbers 5c. Hill Pub. Co., 10th Av at 36th St, New York.
- Ry Age**—Railway Age Gazette. \$5; single numbers 15c. Simmons-Boardman Pub. Co., Woolworth Bldg, New York.
- Ry Age (Mech ed)**—Railway Age Gazette, mechanical edition including the American Engineer. \$2; single numbers 20c. Simmons-Boardman Pub. Co., Woolworth Bldg, New York.
- Ry R**—Railway Review. \$1; single numbers 15c. Railway Review, 1407 Ellsworth Bldg, Chicago; 59 Church St, New York.  
Formerly Railway and Engineering Review.
- Sch Mines Q**—School of Mines Quarterly. \$1.50; single numbers 50c. School of Mines Quarterly, Columbia University, New York.
- Sci Am**—Scientific American. \$3; single numbers 10c. Munn & Co., 361 Broadway, New York.
- Sci Am S**—Scientific American Supplement. \$5; single numbers 10c. Munn & Co., 361 Broadway, New York.
- Sibley J**—Sibley Journal of Engineering. \$2; single numbers 25c. Sibley College, Cornell Univ., Ithaca, N. Y.
- Stevens Ind**—Stevens Indicator. \$1.50; single numbers 50c. Stevens Institute of Technology, Hoboken, N. J.
- Textile World**—Textile World Journal. \$3. Braddon, Lord & Naylor Co., 377 Broadway, New York.  
Formerly published as Textile World Record, monthly at \$2.
- U S Agric Bul**—United States. Dept. of Agriculture. Bulletin. Distributed free of charge. U. S. Dept. of Agriculture, Division of Publications, Washington, D. C.  
Contributions from the Bureau of Chemistry, Forest Service and Office of Public Roads are indexed.
- U S Bur For & Dom Com**—United States. Bureau of Foreign and Domestic Commerce. Special agents series. U. S. Bureau of Foreign and Domestic Commerce, Washington, D. C.
- U S Bur Mines Bul**—United States. Bureau of Mines. Bulletin. Distributed free of charge. U. S. Bureau of Mines, Washington, D. C.
- U S Bur Mines Circ**—United States. Bureau of Mines. Miners' circular. U. S. Bureau of Mines, Washington, D. C.
- U S Bur Mines Tech Pa**—United States. Bureau of Mines. Technical paper. U. S. Bureau of Mines, Washington, D. C.
- U S Bur Stand Bul**—United States. Bureau of Standards. Bulletin. Gratis to educational and scientific institutions and to government departments. U. S. Bureau of Standards, Washington, D. C.  
Sold to individuals by the Superintendent of Documents. \$1; single numbers 25c.
- U S Bur Stand Circ**—United States. Bureau of Standards. Circular. U. S. Bureau of Standards, Washington, D. C.
- U S Bur Stand Tech Pa**—United States. Bureau of Standards. Technology paper. U. S. Bureau of Standards, Washington, D. C.
- U S Sp Cons Rep**—United States. Special consular reports. U. S. Bureau of Foreign and Domestic Commerce, Washington, D. C.
- W Soc E J**—Journal of the Western Society of Engineers. \$3. Single numbers 50c. Western Society of Engineers, 1135 Monadnock Bldg, Chicago.
- Wis U Bul Eng S**—Bulletin of the University of Wisconsin. Engineering Section. Univ. of Wis., Madison.

# Industrial Arts Index

## A Cumulative Index to Engineering and Trade Periodicals

January—December, 1915

- Abattoirs.** See Slaughtering and slaughter houses
- Abbeys**  
Ancient abbey of St. Eloi. J. Alaux. II Am Inst Arch J 3:12-13 Ja '15
- Aberdeen, South Dakota**  
Sewerage  
Sewage disposal plant at Aberdeen, South Dakota; with discussion. W. G. Potter. II plans W Soc B J 19:788-805, pl 1-8 O '14; Same. Eng & Contr 43:37-8 Ja 13 '15; Same cond. Metal Work 84:214-17 Ag 13 '15  
Water supply  
Rectangular fire-service reservoir. W. G. Potter. II Eng Rec 71:260-1 F 27 '15
- Ablene, Kansas**  
Politics and government  
Results obtained at Abilene, in 16 months under commission-manager government. K. Middle. Eng & Contr 42:503-4 N 25 '14
- Ability**  
See also Efficiency, Industrial; Leadership  
Ability tests  
Measuring human intelligence: standardized tests used by the Public health service. H. A. Knox. II Sci Am 112:52-3+ Ja 9 '15  
Mental tests of dementia. B. Hart and C. Spearman. Sci Am 8 80:206-8 S 25 '15  
New way of measuring mental ability. A. M. Jungmann. II diag Sci Am 8 80:140-1 Ag 28 '15  
Selecting the right occupation. Eng N 74:321-2 Ag 12 '15  
Teaching defective children. A. M. Jungmann. Sci Am 112:381 Ap 17 '15
- Ablain St. Nazaire, France**  
Church of Ablain St. Nazaire. J. P. Alaux. II Am Inst Arch J 3:337-8 Ag '15
- Abrasive wheels.** See Grinding machines; Grinding wheels
- Abrasives**  
Abrasive for grinding steel; patented by H. T. Kalmus. Met & Chem Eng 13:762-3 O 15 '15  
Abrasive products at San Francisco fair. II Iron Tr R 67:487 S 9 '15  
Abrasives; various kinds used in grinding and polishing. C. Hawke. Metal Ind n 13:101-2, 148-50 Mr-Apr '15  
Carborundum products, their manufacture and uses as abrasives and refractories. C. B. Hawke. Iron Age 96:1121 N 11 '15  
Grinding wheels for foundry use. C. F. Dietz. Iron Tr R 67:314-18+ Ag 12 '15  
Grinding wheels; history and description of various abrasive compounds. W. C. Gold. Metal Ind n 13:450-2 N '15  
Laps and lapping; abstracts. W. A. Knight and A. A. Gano. diag Am Soc M 16 J 37: 461-6 Ag '15; Iron Tr R 67:24-6 Ji 1 '15; Mach 21:976-8 Ag '15; Discussion. Am Soc M 16 J 37:469-8 Ag '15  
See also Grinding and polishing
- Absolute zero.** See Temperature, Low
- Absorbent cotton.** See Cotton, Absorbent
- Absorption**  
Absorption of glucose by bone-black. H. A. Morton. Am Chem Soc J 36:1832-5 S '14  
Reagents for use in gas analysis; alkaline pyrogallol. R. P. Anderson. diag J Ind & Eng Chem 7:587-96 Ji '15  
Specific absorption of reagents for gas analysis. R. P. Anderson. J Ind & Eng Chem 7: 587 Ji '15
- Academic freedom**  
Common sense regarding academic freedom. Eng Rec 72:35 Ji 10 '15  
Common sense regarding academic freedom. J. W. Alvord. Eng Rec 72:176 Ag 7 '15
- Accelerometer**  
Measuring shocks of vehicles and vibrations of buildings: a means for investigating important traffic problems. A. Boyer-Guillon. II diag Sci Am 8 78:364-5 D 5 '14
- Accidents**  
See also Aeronautics—Accidents; Automobile accidents; Collisions at sea; Railroads—Accidents; Shipwrecks; Street accidents; Subways—Accidents  
Accidents, Industrial  
Conditions of industrial accidents. Sci Am 8 79:179 Mr 20 '15  
Crane and chain accidents; abstract. Ind Eng 14:411-12 O '14  
Explosions and accidents. Engineer 118:531-2 D 4 '14  
Industrial accidents in Massachusetts. Sci Am 112:433 My 8 '15  
Intoxication, a cause of accidents. T. D. West. II Iron Tr R 66:713-16 Ap 8 '15; Same. Foundry 43:267-70 Ji '15  
Prevention of accidents in cotton mills. J. Calder. Textile World 49:622-4 S '15  
Prevention of infection. T. Darlington. Iron Tr R 66:770 Ap 15 '15  
Relation between accidents and inadequate lighting. Illum Eng 8:383-5 S '15  
Safety in stone quarrying; typical accidents in quarries. O. Bowles. U S Bur Mines Tech Pa 11:43-6 '15  
See also Boiler accidents; Boiler explosions; Coal mines and mining—Accidents and explosions; Coke ovens—Accidents; Cranes, derricks, etc.—Accidents; Employers' liability; Explosions; First aid in illness and injury; Foundries—Accidents; Gas manufacture and works—Accidents; Metallurgical plants—Accidents; Mine accidents; Safety devices and measures; Workmen's compensation
- Accountants**  
Contractual relations between clients and accountants. H. M. Temple. J Account 20: 261-6 O '15  
Relations of accountants and engineers in special investigations of various kinds of plants. H. C. Hopson. J Account 20:397-8 N '15
- Accountants, Public**  
Accountants and the public. H. D. Love. J Account 18:480-92 D '14  
Accounting profession in the United States. J. M. Masters. J Account 20:349-55 N '15

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- Accounting profession; its demands and its future. *Id.* W. Sells. *J Account* 20:325-33 N '15
- Certified public accountants. W. H. Rand. *J Account* 19:14-20 Ja '15
- Competitive bidding. *J Account* 20:81-90, 133-6, 385-6 Ag, N '15
- National aspects of public accountancy. *J Account* 19:46-50 Ja '15
- Phases of professional ethics. J. F. Forbes. *J Account* 20:271-5 O '15
- Will we co-operate or must we incorporate? W. D. Whitecomb. *J Account* 20:376-83 O '15
- See also* Accounting; American association of public accountants

**Advertising**

- Educating the public. *J Account* 19:359-63 My '15

**Examinations**

- C. P. A. examinations. S. Walton. *J Account* 19:330-42 Mr '15
- How to pass the C. P. A. examinations. J. Hunter. *J Account* 20:34-7 Ji '15
- Ohio state board of accountancy examination. *J Account* 19:65-71 Ja '15

**Law**

- Arkansas C. P. A. law. *J Account* 19:300-3 Ap '15
- Indiana C. P. A. law. *J Account* 19:304-5 Ap '15
- Iowa C. P. A. law. *J Account* 19:369-72 My '15
- Kansas C. P. A. law. *J Account* 19:372-4 My '15
- South Carolina C. P. A. law. *J Account* 19:308-9 Ap '15
- Texas C. P. A. law. *J Account* 19:375-80 My '15

**Accounting**

- Accountant's report from the standpoint of the several parties at interest. J. S. M. Goodloe. *J Account* 20:91-103 Ag '15
- Accounting for cement packages. G. Wilson. *J Account* 19:198-205 Mr '15
- Accounting for depreciation. R. Sealy. *Elec W* 65:460-1 P 20 '15
- Accounting system for contractors. *Elec R & W Elec'n* 66:162 Ja 23 '15
- Consolidation of balance sheets in holding company accounting. A. W. Wright. *J Account* 19:21-33 Ja '15
- Cooperative organization business methods. W. H. Kerr and G. A. Nabholz. *Bull'og I' N Agric Bul* 178:1-24 '15
- Credits from the viewpoint of a certified public accountant. F. H. Hurdman. *J Account* 18:455-54 D '14
- Department store accounts. H. C. Mages. *J Account* 19:268-91 Ap '15
- Depreciation accounts. W. H. Lawton. *Elec W* 65:1678-9 Ja 26 '15
- Depreciation problems. H. Erickson. *Am Gas Ind* 170 Sept 2, 1662-1658; Discussion, 9: pt 2, 1658-83 '14
- Federal trade commission and accounting. *J Account* 20:129-33 Ag '15
- Importance of accrued accounts. J. F. Forbes. *Elec Rty J* 46:806-10 O 18 '15
- Inter-department profits. S. Walton. *J Account* 19:164-8 P '15
- Library for accounting employees. *Elec Rty J* 46:853 N 8 '15
- Overhauling capital stock. *J Account* 19:62-5 Ja '15
- Return of annual net income by corporations. W. F. Weiss. *J Account* 19:260-7 Ap '15
- Scope of accountancy. *J Account* 19:456-8 Ja '15
- Secret reserves. J. P. Joplin. *J Account* 18:407-17 D '14
- Sub-division, saving and safety. *Horseless Age* 84:869-70 D 18 '14

*See also* Accountants, Public; Auditing; Banks and banking—Accounting; Building—Accounting; Business; Card system in business; Cost accounting; Depreciation; Electric railroads—Accounting; Financial statements; Foundry accounting; Gas companies—Accounting; Highway accounting; Interest; Inventories; Mine accounting; Municipal accounting; Partnership; Plumbing trade—Accounting; Power plants—Accounting; Public service corporations—Accounting;

counting; Railroads—Accounting; School accounting; Waterworks—Accounting

**Societies**

- Accountancy in Canada. G. Edwards. *J Account* 20:334-48 N '15
- Accounting profession in the United States. J. B. Masters. *J Account* 20:350-2 N '15

**Terminology**

- Words often used incorrectly. S. Walton. *J Account* 20:385-6 N '15

**Canada**

- Accountancy in Canada. G. Edwards. *J Account* 20:334-48 N '15

**China**

- Accountant in the Orient. R. S. Fletcher. *J Account* 20:356-60 N '15

**Accumulators.** *See* Storage batteries

**Accumulators, Steam.** *See* Steam accumulators

**Acetate of lime.** *See* Lime acetate

**Acetic acid**

- Indicator in pyrolytic acid. J. M. Jollin. *J Ind & Eng Chem* 7:586 Ji '15
- Production of acetone from pyrolytic acid. M. Barrin. *Il J Ind & Eng Chem* 7:927-9 N '15

**Acetic anhydride**

- Action of acetic anhydride on some benzylidene anthranilic acids. J. B. Kelsey and C. E. Too. *Am Chem Soc J* 37:582-6 Mr '15

**Acetolysis**

- Acetolysis of carbohydrates. S. Born and J. M. Nelson. *Am Chem Soc J* 37:1763-9 Ji '15

**Acetone**

- Production of acetone from pyrolytic acid. M. Barrin. *Il J Ind & Eng Chem* 7:927-9 N '15

**Acetylacetone-thiourea**

- Constitution of acetylacetone-thiourea. W. J. Hale and A. G. Williams. *Am Chem Soc J* 37:594-600 Mr '15

**Acetylene**

- Acetylene-oil-gas generating outfit. *Il Mach* 21:513-14 P '15
- Action of acetylene on metals. A. C. Morrison. *Sol Am* 113:487 D 4 '15
- Dissolved and self-generated acetylene. M. K. Dunham. *Iron Age* 96:343 Ag 12 '15
- Effect of acetylene on metals. *Sol Am* 113:408 N 6 '15
- Explosibility of acetylene. G. A. Hurrell and G. H. Chaffell. *I' N Bur Mines Tech Pa* 112:1-12 '15
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Big financial concern to aid foreign trade. *Ry R* 57:705 N 27 '15  
Organize to promote foreign trade. *Elec W* 66:1180-1 N 27 '15
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Cleveland meeting, 1915. *Iron Tr R* 57:846-8 O 28 '15  
Cleveland meeting, 1915; papers. *Iron Age* 96: 984-1005, 1025-8 O 28 '15  
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9th general meeting, Cleveland, Oct. 22-23. *Met & Chem Eng* 13:830-1 N 15 '15  
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Two groups in the American museum of natural history. J. W. Griggs. *Il Sci Am* 112: 345 Ap 10 '15
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42d annual convention, Jacksonville, Fla., Nov. 30 to Dec. 4, 1914. *Munic J* 37:902-3 D 17 '14  
43d annual meeting, Rochester, N. Y., Sept. 6-13. *Munic J* 39:483-4+ S 23 '15  
Sanitary engineering section discusses refuse disposal, sewerage, water supply and methods of analysis. *Eng Rec* 70:sup385-6 D 12 '14
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Fall session, Chicago, Nov. 17, 1915. *Ry R* 57:648-9 N 20 '15
- American railway bridge and building association**  
25th annual convention, Detroit, Mich., Oct. 10-21. *Eng N* 74:858-9 O 28 '15  
25th annual convention, Detroit, Mich., Oct. 10-21. *Ry Age* 59:753-64 O 22 '15  
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Assigned work of railway engineering association. *Eng Rec* 71:526-7 Ap 24 '15  
Committee reports on electricity, ties, wood preservation, fences. *Elec Ry J* 45:570-1 Mr 20 '15  
Committees; complete list of names of members appointed and subjects specified for investigation and report. *Ry Age* 58:853-5 Ap 16 '15  
President's address. W. B. Storey. *Ry R* 56: 385-6 Mr 20 '15  
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Year's work reviewed. *Eng Rec* 71:374-7 Mr 20 '15
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Committees. *Ry R* 57:522-3 O 23 '15  
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- American society of sanitary engineering**  
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History of the American automobile industry. *Il Becroft. Automobile* 32:775-8, 826-7, 880-1, 922-3 *O* 25-8 '15

Kansas City a great distributing center. *Il Becroft. Automobile* 32:336-7 *F* 15 '15

Michigan's six month's redistribution. M. Braun. *Automobile* 32:504-5 *S* 16 '15

Middle west crops promise increased car sales. *map Automobile* 32:497-9 *Jl* 19 '15

More than 1,800,000 cars registered in U. S. *Horseless Age* 35:4 *Ja* 6 '15

Motor vehicle registrations and revenues, 1914. *Horseless Age* 35:629 *My* 5 '15

Motor vehicles in the United States. *Month* 3 38:657 *My* 13 '15

New England sales 45,063 cars in 2 years. J. T. Sullivan. *Automobile* 32:255-7 *Mr* 1 '15

New England will spend \$25,000,000 for cars and accessories. J. E. Schipper. *map Automobile* 32:333-41 *Mr* 11 '15

Northwest farmers offer car market. *Automobile* 32:270-1 *F* 11 '15

Omaha distributor for the year held U. S. Becroft. *Automobile* 32:355-6 *F* 26 '15

Rhode Island's registration analyzed. *Automobile* 32:826 *S* 11 '15

2,070,903 cars in United States. *Il M. Lay. map Automobile* 32:271-4 *Ag* 12 '15

261,500 cars have electric systems. *other statistics. Automobile* 32:332 *Ag* 19 '15

United States has 1,244,500 cars. *Il M. Lay. map Automobile* 32:265-7 *Mr* 26 '15

Unprecedented year for Studebaker corporation. *Horseless Age* 35:392-90 *Mr* 2 '15

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Car should carry ownership guarantee. *Il A. Ward. Automobile* 32:670-1 *Ag* 1 '15

Motor car laws of all the states. *tabulation. Horseless Age* 35:216 *Ag* 1 '15

Why local regulations of motor truck traffic are objectionable. *Horseless Age* 35:407-2 *Mr* 24 '15

Yellowstone park automobile regulations now in effect. *Eng Rec* 72:172 *Ag* 7 '15

**Automobile mufflers**

Automobile muffler losses experimentally determined. *diagm Horseless Age* 35:612 *Ag* 1 *My* 5 '15

Exhaust silencer operating on principle of neutralizing sounds. *diag Elec M* 60:799-1 *O* 30 '15

Stumping an automobile muffler head. *F. L. Prentiss. Il Iron Age* 94:921-2 *O* 26 '15

**Automobile number plates**

New York state to use new style of automobile number plate. *Il Const Record* 1 *S* 10 257 *O* 30 '15

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- Should dealers' parts accounts be standardized? A. H. Reinson. *II Horseless Age* 36: 59 J 1 '15
- S. A. M. suggests standard names. *Automobile* 33:303 Ag 12 '15
- Solving the spares problem: the Maxwell company's Newcastle plant. *II Automobile* 32:316-20 F 18 '15
- Standardizing names of parts. *Automobile* 33: 236-7 Ag 5 '15

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- Broad demountable rim patent upheld. *II Horseless Age* 36:224-5 M 1 '15
- Chamber of commerce to defend Kardo patents suit. *Horseless Age* 34:339-30 J 9 '14
- Court holds Baker front axle patent to be void. *Horseless Age* 35:285, 293-4 Mr 3 '15
- Decision rendered in carburetor suit. *Automobile* 32:296 F 11 '15
- Delco wins in self-starter patent suit. *Horseless Age* 35:324-324a Mr 10 '15
- N. A. C. C. cross-licensing patent plans now almost completed. *Automobile* 33:39 J 1 '15
- Ohio court dismisses Kardo axle patent suit. *Horseless Age* 35:525 J 21 '15
- Perleman wins decision in long-contested demountable rim patent suit. *Automobile* 33: 394-5 Ag 26 '15
- Two-speed axle decision. *Automobile* 33:79-80 J 1 '15

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- Amerlen's engineering triumph at the Sheepshead Bay speedway. A. L. Clayden. *II Automobile* 33:696-8 O 14 '15
- Astor cup won at 102 miles per hour. *II Horseless Age* 36:351-3 J 15 '15
- Burnham's Peugeot wins Oklahoma City race. *Horseless Age* 35:593 My 5 '15
- Burnham's Peugeot wins Oklahoma race. C. S. Moore. *II Automobile* 32:794-5 My 6 '15
- Dario Resta's Peugeot wins grand prize. *Horseless Age* 35:291-2 Mr 3 '15
- De Palma, in Mercedes, wins at 89.84 miles per hour. *Automobile* 32:969-73 Jo 3 '15
- De Palma's Mercedes wins both Elgin races. *Horseless Age* 34:306-7 Ag 26 '14
- Fluctuations of the averages made in the season's leading contests. *Horseless Age* 36:105 Ag 15 '15
- Getting ready for the international swoopstakes: cars and drivers who will contest. *II Horseless Age* 35:669-72 My 19 '15
- Holiday racing on the speedway. *II Horseless Age* 36:1-3 J 7 '15
- How the Stutz cleaned up at the Elgin races. *Horseless Age* 36:214-15 S 1 '15
- Little trouble at Twin Cities. *Automobile* 33:457 M 9 '15
- Low speed marks Providence century. C. P. Shattuck. *II Horseless Age* 36:312-13 O 1 '15
- Maxwell Mercer Duquesne July 4 winners. *Automobile* 33:53-9 J 1 '15
- Mulford wins 300-mile race on Des Moines speedway. *II Automobile* 33:296-7 Ag 12 '15
- 1914: a good contest year. *Automobile* 31: 1147-1 J 24 '14
- 1914 a year of speed records. J. T. Shaw. *Horseless Age* 34:839-840b J 9 '14
- Oldfield's Maxwell non-stop winner at Venice. *II Horseless Age* 35:392-392b Mr 24 '15
- Over 100 miles per hour on Sheepshead speedway. *II Horseless Age* 36:306-7 O 1 '15
- Overhead valves triumph. A. L. Clayden. *II Automobile* 32:973-7 Jo 3 '15
- Pullen wins Corona race at 87.7 m. p. h. *II Automobile* 31:1017-19 J 3 '14
- Resta in Peugeot victorious. *II Automobile* 33: 1-5 J 1 '15
- Resta takes Harkness cup race at 105.39 miles per hour. *II Automobile* 33:846-7 N 4 '15
- Resta, wins again. *II Automobile* 33:446-7 Mr 11 '15
- Resta wins Century at 101.86 miles per hour. *II Automobile* 33:294-5 Ag 12 '15
- Resta wins grand prize. A. G. Waddell. *II Automobile* 32:398-9 Mr 4 '15
- Resta's generalship won Vanderbilt. A. G. Waddell. *II Automobile* 32:512-13 Mr 18 '15
- Resta's record 101.86 miles per hour. *II Horseless Age* 36:166-7 J 15 '15

Review of Corona road race. H. G. Hall. *II Horseless Age* 34:836-8 D 9 '14

Rickenbacker wins Narragansett 100-mile. J. T. Sullivan. *II Automobile* 33:554-5 S 23 '15

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- Speed records of the 500-mile race. *Automobile* 32:930-1 My 37 '15
- Stutz cars triumph at Elgin road races. *II Automobile* 33:361-5 Ag 26 '15
- Stutz triumphs at 103.6 miles per hour. J. M. Schipper. *II Automobile* 33:685-95 O 14 '15
- Stutz wins first and second places at Twin Cities. *Automobile* 33:455-6 S 9 '15
- Summary of the C. A. C. trophy race. *Horseless Age* 34:308-9 Ag 26 '14
- Thirty-two cars named for Vanderbilt cup race. *II Horseless Age* 35:224a-224c F 17 '15
- 350-mile Astor cup auto race. *II Sci Am* 113: 357-+ O 23 '15
- Twenty-two cars qualify for 500-mile race. D. Beecroft. *Automobile* 32:923-5 My 27 '15
- Twin City race won by fifth of second. *II Horseless Age* 36:260-1 J 15 '15
- Vanderbilt cup race also won by Resta's Peugeot. *II Horseless Age* 35:325-8 Mr 10 '15
- Winning of the grand prize. A. G. Waddell. *II Automobile* 32:448-9 Mr 11 '15
- World's records made in 500-mile sweepstakes. *Horseless Age* 35:725-9 Jo 3 '15
- World's records shattered at Chicago. *II Horseless Age* 35:865-8 Jo 30 '15

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**Automobile service stations**

- Can manufacturers have a standard service policy? A. Macaulay. *Horseless Age* 35:506-8 My 5 '15
- Metropolitan section of S. A. M. discusses truck makers' obligations to customers. B. B. Bachman. *Automobile* 32:772-3 Ap 29 '15
- Service heads want standard policy. *Automobile* 33:283-5 J 18 '15
- Service managers discuss their problems. J. Smith. *Horseless Age* 36:9-10 J 7 '15
- Sub-division, saving and safety. *Horseless Age* 34:869-70 D 16 '14
- Truck makers to decide on standard service policy. L. V. Spencer. *Automobile* 32:841-4 My 13 '15

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**Automobile signals**

- Rear signaling devices for automobiles. *II Sci Am* 113:274-5 M 25 '15

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**Automobile touring**

- Motor travel in desert country of southern California. L. H. Paddy. *II Eng & Min J* 100:835-7 N 20 '15
- Sixth volume added to Blue books, maps. *Automobile* 32:595-9 Ap 1 '15
- Three routes offered to Pacific coast tourists. *Automobile* 31:1079 J 10 '14

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- Industrial plant automobile trailer. *II Iron Age* 96:133 J 15 '15

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- Abbott-Detroit eight. *II Automobile* 33:520-1 M 16 '15
- Abbott eight a new model with interesting features. *II Horseless Age* 36:14-15 J 7 '15
- Allen line two models on one chassis. *II Automobile* 33:882-3 N 11 '15
- Argo chassis larger for 1916. *II Automobile* 33:110-12 J 15 '15
- Auburn models for 1916—a six and four. *II Horseless Age* 35:812 Jo 18 '15
- Auburns, 1916—a six and a four. *II Automobile* 33:156-7 J 23 '15
- Auton and the electric car. J. A. Becker. *Elect J* 46:590-2 M 18 '15
- Briscoe eight and four in same chassis. *II Automobile* 33:151-5 J 23 '15
- Briscoe line, 1916, which will be made up of an eight and a four. *II Horseless Age* 36:12-13 J 7 '15
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 Relative merits of semi, three-quarter and full-floating axles. A. M. Laycock. *Hags Horseless Age* 34:928-31 Ag 26 '14  
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**Bearings**

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**Brazing**

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- Double-deck bascule bridge over Chicago river, H. E. Young, II dings Eng N 74:876-9 N 4 '15
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- Ornamental arch effect secured by cantilever design, Chester, Pa., Eng Rec 71:161 P 6 '15
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- Reinforced-concrete viaduct at St. Louis, Mo., C. W. Martin, II dings Eng N 71:723-7 O 14 '15
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- Steel arch highway bridge in the Hudson highlands, II map Eng N 74:566-7 O 25 '15
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- Wind stresses in highway bridges, R. Fleming, Eng N 73:373-5 P 26 '15
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- Bridge cargo falls at Red Bank, N. J., are all failures fortuitous? II Eng N 71:781-6 O 21 '15
- Bridge sidewalk failure due to paving expansion, Dallas, Texas, II dings Eng N 73:32 Ju 11 '15
- Collapse of arch framework, Detroit Superior bridge, Cleveland, II Eng N 73:141-2 Jo 21 '15
- Collapse of un-diffused timber Howe bridge, II Eng N 71:222 J1 20 '15
- Concrete arch forms fall and steel trusses collapse, II Eng Rec 71:63 Jo 26 '15
- Flood wrecks majority bridges, II Eng N 71: 516-8 Jo 15 '15
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- Inspection and maintenance of suspension bridges, II Eng N 71:691-3 J1 13 '15
- Instructions governing the inspection of bridges, culverts and waterways under the Missouri Pacific Ry., Eng & Contr 43:9-11 N 17 '15

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- Actual operations in moving the bridge shifting of double truss spans on the Chicago & North Western Ry., at Milwaukee, II Eng & Contr 43:106-9 Ap 14 '15
- Design and construction of a movable bridge to the actual shifting of a double truss swing bridge on the Chicago & North Western Ry., at Milwaukee, II Eng & Contr 43:56-6 Ap 14 '15
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- Removal to new location of the bridge into place, old South Western Ry., at Milwaukee, II Eng Rec 71:163 J1 Ap 16 '15
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- Patenting steelwork for the Hell Gate arch, II Eng Rec 70:684-6 P 26 '14
- Hell Gate bridge in the shop, II Eng N 72:116-18 D 8 '14
- Splicing table in the structural shop equipment in Port 1911 bridge works, II Eng, Thomas II Iron Age 75:119-41 Jan 11 '15

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Construction of the Twelfth street traffic-way viaduct, Kansas City, Mo. *Il*. E. Howard. *diags Eng & Contr* 44:331-2 O 27 '15

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Contractors span 180-foot canyon without using falsework. *Il Eng Rec* 71:181-2 F 6 '15

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**Estimates**

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- Inverted bridge which should have failed carries heavy load. Il Eng Rec 72:32 J1 3 '15
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- Results of tests to determine the distribution of loads from concrete floor slabs to steel joists; abstracts. Eng & Contr 44:365-7 N 10 '15; Eng Rec 72:573-80 N 6 '15; Eng N 74:933 N 11 '15

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- Bridge renewal without falsework or interference with traffic. Il diag Ity Age 58:318-19 F 19 '15
- Dismantling truss spans and erecting plate girders without false work. W. & L. R. Il. R. U. Smith. Il diag Ity R 56:340-2 M 13 '15
- Economical method of replacing trusses with girders. S. T. Corey. Il diag Ity Age 58:1077-9 My 21 '15
- Erecting new trusses on a canal bridge and dam. W. R. Browne. Il diag Eng N 74:173-4 J1 23 '15
- Lifting one truss of a bridge to place larger shoe. W. R. Browne. Il diag Eng N 73:1031-5 My 27 '15
- New bridge across the Missouri river at Shelby. Mo. Il diag Ity Age 59:13-16 J1 2 '15
- Installing a highway bridge by end-pin slings. R. C. Hardman. Il Eng N 73:352-3 F 18 '15
- Rebuilding piers and abutments. Black river bridge. J. U. Smith. Il diag Eng N 74:1046-7 N 25 '15
- Rebuilding the Burlington's Platte river bridge. J. H. Merriam. Il diag Eng N 74:728-32 O 14 '15
- Reconstruction of Mississippi river bridge at Keokuk. diag Eng N 74:360-2 Ag 5 '15
- Reconstruction of piers of Little Rock Junction bridge across the Arkansas river at Little Rock. C. E. Smith. diag plan Eng & Contr 44:85-8, 124-7 Ag 4, 18 '15
- Removing through trusses without dismantling. Il Ity Age 58:474 M 12 '15
- Renewing a busy main line bridge on the Santa Fe. L. C. Lawton. Il Ity Age 59:350-1 Ag 20 '15
- Renewing bridges under traffic on the Wheeling & Lake Erie R. R. Il Eng & Contr 43:314 Ap 7 '15
- Renewing Howe trusses without delay to traffic. J. J. Wishart. Il Ity Age 58:1081-2 My 21 '15
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- Cutting up a bridge with the oxyhydrogen torch. Il Sci Am 112:71 Ja 16 '15
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- Conting disintegrated stone abutments with concrete. Il Eng Rec 71:337-8 M 13 '15
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- Lifting bridge trusses to adjust rollers. H. T. Welby. Il diag Eng N 71:555-6 S 16 '15
- Overcoming defective foundations for three piers. C. E. Smith. Il plan Ity Age 57:151-5 J1 18 '14
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- Selection and use of bridge and building tools. S. C. Tanner. Il Ity Age 59:339-40 Ag 20 '15
- Steel billets needle bridge shoe in quarters too close for beams. T. J. Whikerson. Il diag Eng Rec 72:88 J1 17 '15
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- General specifications for bridge work of Illinois state highway commission. Eng & Contr 42:390-2 O 21 '14
- Specifications for waterproofing solid steel-floor railroad bridges. S. T. Wagner. Eng & Contr 43:79-81 Ja 27 '15; Same rev. Eng & Contr 44:209-11 S 15 '15

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- Closing Detroit-Superior arch. Il Eng N 74:813-14 O 21 '15
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- Design and construction of provincial highway bridge at Mestre, Italy. A. M. Wolf. diag Concrete Cem 6:294-6 Jo '15
- Details of main span of Detroit-Superior bridge at Cleveland. diag Eng Rec 70:640-1 D 12 '14
- Erection of steel arch span, Detroit-Superior viaduct. Il diag Eng N 71:366-7 Ag 19 '15
- First concreting on Brooklyn-Brighton viaduct, Cleveland. Il diag Eng N 74:481-6 S 9 '15
- Graphical analysis of arches with fixed ends greatly simplified. C. S. Whitney. Eng Rec 72:321-6 S 11 '15
- Handling steel centers for concrete arches. H. R. Ketchum. Il Eng N 74:462-3 S 2 '15
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- Method for determining two-hinged arch reactions. C. S. Whitney. Eng & Contr 44:123-4 Ag 18 '15
- Methods and equipment used in constructing the superstructure of the Detroit-Superior high level bridge in Cleveland. O. Il diag Eng & Contr 44:10-13 J1 7 '15
- New concrete arch viaduct of the Philadelphia, Baltimore & Washington R. R. over Gwynns Falls, Baltimore. Il plans map Ry R 56:345-8 M 13 '15
- 977-ft. Hell Gate bridge becomes an arch. Il Eng N 74:708-9 O 7 '15
- Old English bridge replaced by new flat-arch structure. diag Eng Rec 71:720-1 Jo 5 '15
- Ornamental bridge at Akron built of slung concrete. Il Eng N 74:769-70 O 21 '15
- Progress on Summit cut-off of the Lackawanna. Il diag Ity Age 58:235-9 F 5 '15
- Proposed centering for large span stone bridges. S. Berg. diag Engineer 119:172-4, 521-3, 559-70 My 14, 28, Je 11 '15
- Reinforced-concrete arch bridge has stone facing. Il Eng Rec 72:164-5 Ag 7 '15
- Reinforced-concrete highway arch for grade separation. diag Eng Rec 70:703-1 D 26 '14
- Steel arch bridge on curved gradient in the Hetch valley. Il diag Engineer 118:549-50 D 11 '14; Same cond. Eng R 48:760-1 F 15 '15
- Tunkhannock viaduct nearing completion. Il Eng Rec 72:42-3 J1 10 '15
- World's longest arch, across Hell Gate, New York city, is closed and paving is planned. Il Eng Rec 72:438-40 O 9 '15

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- Bascule bridge at Sault Ste. Marie acting as a simple truss span. Il diag Eng N 73:108-10 Ja 21 '15

- Chehalis river temporary bascule bridge. Il diag Eng Rec 71:17 Ja 2 '15

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- Design and construction of the sub-structure of the Buffalo river lift bridge, Buffalo, N. Y. *Il* *Eng* & *Contr* 44:362-5 N 10 '15
- Design, construction and detailed labor costs of the substructure of the double-leaf trunnion bascule bridge at Chicago avenue, Chicago. *Eng* plan *Eng* & *Contr* 43:388-90, 426-33 O 21, N 4 '14
- Design features of a single-leaf trunnion bascule bridge over the Channel street waterway, San Francisco. *Eng* plans *Eng* & *Contr* 44:248-50 S 29 '15
- Design features of the Gatum river bascule bridge, Panama Canal Zone. P. L. Kaufman. *plan Eng* & *Contr* 44:13-14 J1 7 '15
- Development of the Sudan. *Il* *map* plans *Eng* *Engineer* 119:271-4 Mr 19 '15
- Double-deck bascule bridge over Chicago river. H. E. Young. *Il* *Eng* *Eng* N 74:376-9 N 4 '15
- Double-leaf bascule railway bridge. *Il* *Eng* *Engineer* 120:246-7 S 10 '15
- Interesting structure over the Buffalo river. *Il* *Eng* *map* *Eng* Age 59:465-7 S 10 '15
- New Haven road to build new Thames river bridge. *Eng* N 74:1053 N 25 '15
- Rail-end connections for bascule bridges. *Il* *Eng* *Eng* N 73:1216-17 Je 21 '15
- Rolling lift bridges for the Delray connecting railroad. *Il* *Eng* *Eng* 56:359-60 Mr 13 '15
- Small bascule bridge; Pore Marquette R. R. *Il* *Eng* *plan Eng* N 73:929 My 13 '15
- Substructure of the Lake street bascule bridge at Chicago. H. E. Young. *Il* *Eng* N 74:334-6 N 11 '15
- Trolley wire on double-leaf bascule bridge. S. L. Foster. *Eng* *Eng* Ry J 46:1042-4 N 20 '15

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- Balanced cantilever reinforced-concrete bridge, Chester, Penn. H. L. Quimby. *Il* *Eng* *Eng* N 73:578-81 Mr 25 '15
- Construction features of the Bloomfield bridge, Pittsburgh, Pa. A. E. Sertore. *Il* *Eng* & *Contr* 43:5-8 Ja 6 '15
- Construction features on the reinforced concrete cantilever bridge on Rummynode avenue, Cincinnati. *Il* *Eng* & *Contr* 43:312-13 Ap 7 '15
- Design features of the cantilever, simple-truss and girder spans of the Bloomfield bridge, Pittsburgh, Pa. *Eng* *Eng* & *Contr* 42:240-3 S 9 '14
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- Erection traveler, new Quebec bridge. H. P. Jordan. *Il* *plans Eng* N 73:417-22 Mr 4 '15
- Hopple street viaduct, Cincinnati. *Il* *Eng* *Mun* J 39:179-83 Ag 5 '15
- Ornamental arch effect secured by cantilever design, Chester, Pa. *Eng* *Rec* 71:164 1<sup>st</sup> 6 '15
- Provision for traction streamers in Quebec bridge. C. A. Norton. *Eng* *Rec* 71:492-3 Ap 17 '15
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- Architectural effects secured in Glen Falls arch bridge over Hudson river. *Il* *Eng* *Eng* *Rec* 72:574-6 N 6 '15
- Balanced cantilever reinforced-concrete bridge, Chester, Penn. H. L. Quimby. *Il* *Eng* *Eng* N 73:578-81 Mr 25 '15
- Belgian bridge in reinforced concrete. *Sci* *Am* 112:335 Ap 10 '15
- Bridge work of the C. M. & St. P. Ry. *Il* *plan* *Ry* *Il* 56:335-8 Mr 13 '15
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- Building a long concrete viaduct at St. Louis. P. A. Richardson. *Il* *Eng* *Rec* 70:692-3 D 26 '14
- Cabrillo bridge at the San Diego exposition. *Il* *Eng* *Eng* N 73:926-8 My 13 '15

- Casting concrete-slab bridges for the Pennsylvania. R. R. L. M. Schrufer. *Il* *Eng* *Eng* N 71:125-6 J1 15 '15
- Completing the summit cut-off of the Lackawanna. *Il* *Eng* *Age* 59:289-10 O 20 '15
- Concrete arch bridge at Saskatoon. *Il* *Eng* *Eng* N 73:434-6 Mr 4 '15
- Concrete bridges with stone and brick facing. C. E. Dryer. *Il* *Eng* N 73:1214-15 Je 21 '15
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- Direct-lift span provides 56-foot clearance over Louisville and Portland canal, fl Eng Rec 72:199-200 Ag 14 '15
- Erecting a lever lift bridge, fl Eng N 74:123-1 J1 15 '15
- Lift bridge constructed on 4 per cent. grade in Fairport, N. Y., C. H. Waters, fl Eng N 73:705-6 Ap 15 '15
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- Two large lift bridges at Chicago, diags Engineer 120:339-40 O 8 '15
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**Bridges, Military. See Military bridges****Bridges, Movable. See Bridges, Bascule; Bridges, Lift; Drawbridges****Bridges, Pontoon. See Pontoon bridges****Bridges, Railroad**

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- Bridge work of the C. M. & St. P. Ry, fl plan Ry R 56:335-8 Mr 13 '15
- Building concrete abutments in the Platte river, J. H. Merriam, fl diags Ry Age 59:383-6 Ag 27 '15
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- Chart of equivalent uniform loads for railway bridges, D. H. Steinman, Eng N 73:780-2 Ap 23 '15
- Chesapeake & Ohio Northern railway bridge over the Ohio river at Scottdale, O., diags Eng & Contr 44:34-5 Ag 4 '15
- Completing the summit cut-off of the Lackawanna, fl Ry Age 59:809-10 O 29 '15
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- Features of the Tunkhannock creek viaduct recently completed at Nicholson, Pa., fl Eng & Contr 44:389-90 N 17 '15
- First French bridge built in war time, W. S. Hatt, fl Ry Age 59:561 S 21 '15
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- Long-span continuous truss bridge over the Ohio, diags Eng N 71:611-6 J1 8 '15
- Longest riveted simple trusses erected around old bridge by cantilever method at Pittsburgh, fl diags Eng Rec 72:321 J1 17 '15
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- New bridge of the Chicago, Burlington & Quincy R. R. over the Missouri river at Kansas City, Mo., diag Eng & Contr 11:170 S 1 '15
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- New R. R. & P. structure across Allegheny river at Riverside, N. Y., fl diags Ry Age 58:815-6 Ap 16 '15
- New Canada-New England railroad link completed; Van Buren bridge route, maps Eng Rec 71:559 My 1 '15
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- Overloads allowed in operating railroad bridges, J. E. Grother, Eng Rec 72:371-2 Ja 16 '15
- Pennsylvania's concrete bridge over the Susquehanna, diags Eng Rec 71:329 Mr 13 '15
- Piecemeal erection of a bridge on the Boston & Maine R. R., R. W. Lenzke, fl diags Eng N 74:1067-9 I 2 '15
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- Solid deck trestles and bridges on the Illinois Central. *Il diags* *Il Ry Age* 59:279-80 Ag 13 '15
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- Viaduct construction on the Kansas City terminal. A. R. Witzten. *Il diags* *Ry Age* 58:397-400 Mr 5 '15
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**Bridges, Rolling lift. See Bridges, Bascule****Bridges, Stone**

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**Bridges, Suspension**

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**Briquets (Iron)**

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**Britannic (steamship)**

- White Star liner Britannic. *Il Int Marine Eng* 19:556-9 D '14

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- 85th annual meeting, Manchester, Sept. 7-11. *Power* 42:529-30 O 12 '15

- Manchester meeting. *Engineer* 120:268-70, 292-3 S 27 & 28 '15

**British Columbia**

*See also* Mines and mineral resources—British Columbia

**Law**

- Acquiring placer-mining claims in British Columbia. J. A. Macdonald. *diag* *Eng & Min J* 100:757-9 N 6 '15

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- 3d meeting, Manchester. *Engineer* 118:578-9 D 18 '14

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- Broaching connecting-rods. *Il Mach* 21:482 F '15

- Broaching operation done in the punch press. F. K. Hudson. *diags* *Mach* 21:493-4 F '15

- 75-ton self-contained hydraulic broaching and forcing press. *Il Ind Eng* 14:401 O '14

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- Chief interchange car inspectors' and car foremen's association, 17th annual convention. *Ry Age (Mech ed)* 89:522-5 O '15
- Inspection and repairs of freight cars by piecework. J. J. Tolin. *Ry Age (Mech ed)* 89:467-8 S '15
- Making of good car inspectors. A. M. Orr; "16. C." *Ry Age (Mech ed)* 89:575-8 N '15
- Uniformity in car inspection. M. Maren. *Ry Age (Mech ed)* 89:468 S '15

**Car lighting**

- Analysis of requirements for modern street car lighting. L. C. Poma. *il diags Illum Eng Soc* 10:82-100 no 1 '15
- Better car illumination effects other economies. *Elec Ry J* 44:1308-9 D 12 '14
- Car electric lighting systems. E. S. McNab. *Ry Age (Mech ed)* 89:467-8 S '15
- Car lighting generator with underframe suspension. *il diags Ry Age* 59:208 J1 30 '15; *Eng N* 73:1084 Ja 3 '15
- Electric lighting of railway passenger cars. E. S. McNab. *Ry J* 57:696-9 N 27 '15
- Illumination of cars. *Elec V* 65:720-30 Mr 20 '15
- Improved head-end axle generating system for train lighting. *il Elec It & W Elec N* 67:490-1 S 11 '15
- Improved lighting for Westchester cars. *il Elec Ry J* 46:918-19 O 30 '15
- New York municipal car the lighting. W. C. Gove. *il Elec Ry J* 45:614-18 Mr 27 '15
- Practical study of car lighting problems; with discussion. W. C. Gove and L. C. Porter. *bibliog il plans Illum Eng Soc* 10:227-52 no 3 '15
- Recent improvements in the electric lighting of steam railroad cars. E. C. Laupher. *il diags Am Inst Enl Pro* 31:1829-46 Ag '15
- Regulator for car-lighting circuits. *il diags Elec Ry J* 45:851-2 My 1 '15
- Underframe axle lighting equipment. *il diags Ry J* 56:568-70 Ap 24 '15; *Ry Age (Mech ed)* 89:267-8 My '15

**Car load. See** Freight car service—Car load**Car painting**

- Master car and locomotive painters' 46th convention. *Ry Age* 59:506-8 S 24 '15
- Master painters' 46th annual meeting. *Ry Age (Mech ed)* 89:539-42 O '15
- Painting cars in two days. P. V. See. *il diag Elec Ry J* 45:584-6 Mr 20 '15
- Painting locomotives and steel cars. M. L. Hims. *Ry Age (Mech ed)* 88:641-2 D '14; Abstract. *Am Soc M E J* 27:120-1 F '15

**Car painting—Continued**

Painting steel car doors. *diag*s Ry Age (Mech ed) 88:643-4 D '14

Relation of the paint shop to the repair yard. W. Buchanan. *Ity Age* (Mech ed) 89:28-9 Ja '15

Steel car design from a protection standpoint. J. D. Wright. *Ry Age* (Mech ed) 89:525-6 O '15

**Car pooling. See Freight car service****Car pullers**

Car-pullers for switching at industrial plants. *Eng N* 74:299 Ag 12 '15

**Car resistance. See Train resistance****Car roofs**

Passenger car roof construction. *diag*s *Ity Age* 59:332 Ag 20 '15; Same. *Ry Age* (Mech ed) 89:486-8 S '15

Testing car roofs for leakage. *diag* *Ity Age* (Mech ed) 88:374; 89:299 J1 '14, Ag '15; *Ry R* 56:787-8 Je 12 '15; *Sci Am* 113:276 S 25 '15

**Car sanitation. See Car cleaning; Car ventilation; Cars—Disinfection****Car shops. See Railroads—Shops****Car signs**

Route signs for surface cars. *It* *Elec Ry J* 46:260-2 Ag 14 '15

**Car spotting charges. See Railroads, Industrial****Car trucks**

Experiments to determine the forces imposed on a truck side frame and the stresses produced. L. B. Bondley. *It* *diag*s *Ity R* 56:360-3, 491-7 Ap 3-10 '15; Same cond. *Ity Age* (Mech ed) 89:127-9 Mr '15

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Four wheel trucks for passenger cars. R. V. Wright. *diag*s *Ity Age* (Mech ed) 89:569-74 N '15

Master car builders' association committee report. *Ity R* 56:241-2 Je 19 '15

Narrow-gauge cars for the Burma mines. Ry. F. C. Coleman. *It* *plans* *Ry R* 57:173-5 Ag 7 '15

Rolled steel truck frames. *It* *Ity Age* 59:331 Ag 20 '15

Truck designed for low maintenance costs. *It* *Elec Ry J* 45:1126 Je 12 '15

*See also* Draft gears

**Car ventilation**

Improvement in sanitation of cars; with discussion. D. L. Cooke. *It* *diag*s *Am Soc Heat & V* 10 20:253-78 '14

Tests of exhaust ventilators on passenger trains. G. L. Fowler. *Ity Age* 58:1009-12 My 14 '15; Same. *Ity Age* (Mech ed) 89:236-8 My '15

Ventilation of sleeping cars. T. R. Crowder. *Ity Age* (Mech ed) 89:464-6 S '15

**Car wheels**

Accident caused by defective wheels. H. W. Behn. *Ity Age* 59:48 J1 9 '15

Annealing car wheels. W. J. Keop. *Foundry* 43:187-8 My '15

Association of manufacturers of chilled iron wheels; presidential address. G. W. Lyndon. *Ity R* 57:505-6 O 16 '15; Same cond. *Ity Age* 59:600 O 15 '15; Same cond. *Ry Age* (Mech ed) 89:578 N '15; *Excerpta*. *Elec Ry J* 46:918 O 30 '15

Boring machine for car wheels. *It* *Iron Tr R* 55:1180 D 24 '14

Built-up car wheels declared inadequate. *diag* *Eng N* 74:11 J1 1 '15

Car-wheel grinding machine. *It* *Iron Age* 94:1435 D 31 '14

Cause of thick and thin wheel flanges. J. P. Barnes. *Elec Ry J* 46:189-90 J1 31 '15

Chicago elevated shop practice. *It* *Elec Ry J* 46:561-2 Mr 20 '15

Chill and shrinkage of cast iron. R. A. Pitman. *Foundry* 43:304 Ag '15

Chilled car wheels. W. J. Keop. *Foundry* 43:469 N '15

Control of chill in cast iron, considering the elements effective in the manufacture of malleable castings and chilled car wheels. G. M. Thrasher. *It* *Am Inst Min* 10 Jul 108; 129-28 O '15; Same. *Foundry* 43:461-3, 4 D '15; Same. *Iron Tr R* 57:1171-3, D 16 '15

Danger of welding processes as applied to tires and wheels. M. D. Hayes. *It* *Elec Ry J* 46:942-4 My 15 '15

Effect of car-wheel diameter on motor heating. *Elec Ry J* 46:70 J1 10 '15

Effect of car-wheel diameter on motor heating. A. L. Broomall. *Elec Ry J* 46:152-3 S 11 '15

Effects of variance in car-wheel diameters on motors. A. S. Langsdorf. *Elec Ry J* 44:1344 D 19 '14

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Fuel ratio for car wheel iron. A. S. Dowler. *Foundry* 43:497-8 Mr '15

Fuel ratio on car wheel iron. W. J. Keop. *Foundry* 43:551-2 P '15

Grinding street car wheels under the car. *It* *Mach* 21:462 P '15

Making car wheels at the Lenoir car works. G. S. Evans. *Foundry* 43:351-3, 428-31, 433-9 S-N '15

Old and new methods of making carwheels. G. V. Slocum. *diag*s *Iron Age* 96:676-9 S 23 '15

Relation of wheel coning to rails and the plates. W. M. Osborn. *Ry R* 56:357-9 Mr 13 '15

Report on wreck due to broken car wheel. *diag*s *Ry R* 56:789-91 Je 12 '15

Restoring steel wheel flanges with a welder. J. A. Murphy. *It* *Elec Ry J* 45:719-20 Ap 10 '15

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Strong claims for chilled iron car wheels. J. K. Vial. *Ity Age* 58:220 Ap 16 '15

Wheel diameter and motor heating. F. J. Foote. *Elec Ry J* 46:211 O 30 '15

Wreck due to a faulty car wheel. *It* *Iron Tr R* 57:337-40 J N 11 '15

*See also* Axles

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Mines' carbide lamps. J. W. Paul. *It* *S Ind Mines* (Chc 18:1) 10 '15

**Carbohydrates**

Acetolysis of carbohydrates. S. Baer and J. M. Nelson. *Am Chem Soc J* 37:1463-9 J1 '15

**Carbolic acid**

Analysis of coal with phenol as a solvent. S. W. Parr and H. E. Huley. *It* *diag*s *map* *It* *Eng Exp Sta Bul* 76:1 J1 '11

Extraction of carbolic acid from oils of the distillation of coal tar. W. Mason. *diag* *Met & Chem Eng* 13:293 4 My '15

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Carbolium and crocote. H. H. Abcock. *Am Gas Light J* 103:88-9, 125 J1 26, Ag 23 '15

Carbolium and crocote. S. H. Church. *Am Gas Light J* 103:108 Ag 16 '15

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Effect of carbon on the physical properties of heat-treated carbon steel. J. H. Nond. *It* *Am Inst Min* 10 Jul 106:2341 57 D '15

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*See also* Chemistry. Organic; Coal; Coke; Electric light carbons

**Carbon bisulphide**

Removal of carbon bisulphide from coal-gas. K. V. Evans. *diag* *Met & Chem Eng* 13:239-40 Ap '15

**Carbon brushes. See Brushes (electric machinery)**

**Carbon dioxide**

Calculating dry flue-gas loss. C. W. Hubbard. Power 42:746-8 N 30 '15  
 Determination of carbon dioxide in baking powder and carbonates. H. W. Brubaker. diag J Ind & Eng Chem 7:432-3 My '15  
 How much CO<sub>2</sub> to expect with various kinds of fuel. V. J. Azbe. Power 42:712-14 N 23 '15

**Carbon dioxide recorders**

Hays CO<sub>2</sub> and draft recorder. II Eng M 49:sup 6-8 S '15  
 Parker CO<sub>2</sub> machine. II diag Power 42:297-9 Ag 31 '15  
 Recording power plant operations. J. C. Smallwood. II diag Eng M 50:33-46 O '15  
 U-tube carbon dioxide indicator. W. A. Cunningham. II diag Iron Age 96:870-2 O 14 '15

Carbonia finish. II Am Gas Light J 103:81 Ag 9 '15

**Carbonization of coal**

Carbonization in bulk—Koppers' ovens. C. J. Hamsburg. II diag Am Gas Inst Pro 9:pt 1, 543-601; Discussion. 601-14 '14  
 Mode of decomposition of coal by heat. H. C. Porter and G. B. Taylor. diag Am Gas Inst Pro 9:pt 1, 234-83; Discussion. 9:pt 1, 283-8 '14  
 Report of the committee on progress in carbonization methods. II diag Am Gas Inst Pro 9:pt 1, 450-539; Discussion. 9:pt 1, 539-43 '14

Carbons, Electric light. See Electric light carbons

**Carborundum**

Carborundum and cork exhibits at the Panama-Pacific International exposition. II Met & Chem Eng 13:458-9 J1 '15  
 Silicon, coke, sawdust and soil. C. E. Williams. Iron Tr R 56:457-8 Mr 4 '15  
 See also Silundum

**Carbureters**

Angular venturi in Edwards. diag Automobile 33:240 N 18 '15  
 Automatic carburetor for explosion motors. A. Krebs. diag Horseless Age 35:474-5 Ap 7 '15  
 Balanced valve on new Stromberg. II diag Automobile 31:1175 D 24 '14  
 Brad-Kent carburetor. II Horseless Age 35:539 Ap 21 '15  
 Car and carburetor design suitable for driving with any fuel. diag Automobile 33:288-91-1 Ag 12 '15  
 Carburetor and oiling of Stevens-Duryea. diag Automobile 32:276 F 11 '15  
 Carburetion trouble. I. N. McClinton. diag Power 41:275 F 23 '15  
 Carburetors and their work. R. C. Collins. II Horseless Age 36:19 J1 7 '15  
 Chaudet carburetor. diag Horseless Age 35:851 Je 23 '15  
 Controlling the mixture without moving parts. diag Horseless Age 35:711-12 My 26 '15  
 Decolton rendered in carburetor suit. Automobile 32:296 F 11 '15  
 Duplex carburetor for lights. II diag Automobile 32:199 Ja 28 '15  
 Extended venturi in new Schobler. diag Automobile 32:541 Mr 25 '15  
 Features of Browne carburetor. Horseless Age 34:923 D 23 '14  
 Franklin cylinder oil carburetor. II Power 41:674 My 18 '15  
 Gas and air in carburetors. Automobile 32:371 F 25 '15  
 Great variety in carburetors. II diag Automobile 32:238-49 F 4 '15  
 Influence of the carburetor nozzle on the mixture proportion in liquid fuel motors. K. Rummel. diag Horseless Age 35:508-11, 552-5, 584-7, 618-20, 680-2 Ap 14-May 5, 19 '15  
 Limit gauge for distance between an inside and an outside surface. diag Mach 21:493 F 15 '15  
 Languanore carburetor now made in America. diag Automobile 33:386 Ag 28 '15  
 Master carburetor. diag Horseless Age 35:571 Ap 28 '15  
 New-Speed carburetor. diag Automobile 33:754 O 21 '15  
 New Stromberg type II carburetor. diag Horseless Age 34:879 I 16 '14  
 Notes on carburation. M. T. Putnam. Horseless Age 35:347-50 Mr 10 '15

Vacuum carburetor system. diag Horseless Age 35:207 F 10 '15

Vacuum-velocity ratio not constant. A. B. Browne. II Automobile 31:1066-7 D 10 '14  
 See also Automobile engines; Automobiles—Feeding systems; Gas and oil engines

Carburization. See Case hardening

**Card clothing**

Improved construction invented in Switzerland. diag Textile World 50:180-90 N '15

**Card system in business**

Card index and what it means. J. J. Reynolds. Elec Ry J 46:815-18 O 16 '15  
 Card index increases efficiency of new-business department. Elec R & W Elec'n 66:899-900 My 15 '15

Card records in selling accessories. Horseless Age 35:229-30 F 17 '15

Follow-up card index of new buildings. Elec W 66:206 J1 24 '15

Where's that pattern? and how to locate it. H. A. Russell. II Foundry 43:263-5 J1 '15

See also Accounting; Files and filing (documents); Records

**Cardboard**

Where waste newspapers go. Sci Am 111:471 D 5 '14

**Carding machinery**

Stripping mechanism for cards. diag Textile World 50:73 O '15

Carhouses. See Car houses

**Caricatures and cartoons**

Truman Curtis, cartoonist. II. Hurley. II Inland Pr 56:24-6 O '15

**Carlisle, Pennsylvania****Streets**

Vitrified-brick pavement on an old macadam base. J. C. Hiltshaw. II diag Eng N 72:1262-3 D 24 '14

**Carnotite**

Concentration of carnotite ores. Met & Chem Eng 13:273 My '15

Extraction and separation of the radioactive constituents of carnotite. H. M. Thum. Am Chem Soc J 37:1797-1816 Ag '15

Method of treating carnotite ores. Eng & Min J 90:864 My 15 '15

Radium-uranium ratio in carnotites. S. C. Lind and C. E. Whittemore. diag Am Chem Soc J 36:2006-82 O '14

Radium-uranium ratio in carnotites. S. C. Lind and C. E. Whittemore. II diag U S Bur Minus Tech Pn 88:1-28 '15

**Carroll, Cincinnati & Ohio railway**

Kirkhorn extension of the Carroll, Cincinnati & Ohio Ry. II Ry R 56:239-42 F 20 '15

**Carpenter shops**

Details of a standard portable carpenter shop on construction work. II plans Concrete Cem 6:186 Ap '15

Planning a small carpenter shop. W. S. Wilkin. II plan Bldg Age 37:35-7 O '15

**Carpentry**

See also Building; Cabinet making; Cars; Doors; Floors; Lathes; Railings; Roofs; Scaffolding; Slide rule; Woodworking machinery

**Study and teaching**

Training carpenters for the trade at Bridgeport. J. E. Johnson. II Am Ind 15:26-8 Mr '15

**Carriers**

See also Commerce; Demurrage; Express companies; Freight; Interstate commerce; Railroads; Shipping; Steamboat lines

**Cars**

Day State combination car. II diag Elec Ry J 46:854-7, 1068-73 O 23, N 27 '15

Brake shaft drop handle and ratchet. diag Ry Age (Mech ed) 80:43 Ja '15

Buffalo, Rochester & Pittsburgh standard outfit cars. II plans Ry Age 58:145-7 Je 18 '15

Car control. J. Fitzmorris. Ry Age (Mech ed) 80:71-2 F '15

Car design from a service standpoint. II diag Elec Ry J 46:578-80 S 18 '15

Cars and locomotives ordered and built in 1914. Ry Age 58:15-20 Ja 1 '15

**Cars—Continued**

Cars and locomotives ordered in 1914. *Ry R* 56:36-41 Ja 2 '15  
 Cars at less than cost. N. W. Storer. *Elec Ry J* 46:635 S 25 '15  
 Combination car for Kansas interurban line. *Il Elec Ry J* 46:806 Ap 24 '15  
 Commissary car, Canadian Pacific railway. *Il plan Ry R* 56:707-8 D 13 '14  
 Curtain fixtures without pinch handles. *Il Elec Ry J* 46:298-9 F 6 '15  
 Extensible trap door for passenger cars. *Il plan Elec Ry J* 46:116-17 J 17 '15; *Ry Ago* 59:207-8 J 1 30 '16; *Ry Ago* (Mech ed) 89:430-1 Ag '16; *Ry R* 57:268-9 Ag 28 '15  
 Fireproofing wood for passenger car construction on British railways. *Ry R* 57:889 N 27 '15  
 Improvements in Des Moines interurban cars. *Il Elec Ry J* 46:156-7 J 1 24 '15  
 Making interurban cars comfortable. *diag* *Elec Ry J* 46:834 O 16 '15  
 Master car builders' 49th annual convention. *Elec Ry J* 46:1163-4 Ja 19 '15  
 Master car builders' 49th annual convention. *Il R* 56:833-42 Ja 19 '15  
 New passenger car equipment Union Pacific R. R. *Il plans Ry R* 56:195-6 F 6 '15  
 Relative merits of long and short wheel base scale-testing cars. C. A. Briggs. *Il diag* *Ry R* 57:197-201 Ag 14 '15  
 Remodeled mail cars for housing government field parties. *Il plan Ry Ago* 57:1149 D 18 '14  
 Salt Lake & Utah railroad. *Il map Elec Ry J* 46:54-5 Ja 2 '15  
 Semi-steel cars in collision. C. G. Keen. *Il diag* *Elec Ry J* 46:715-16 Ap 10 '15  
 Steel frame double truck caboose. *Il diag* *plan Ry Ago* (Mech ed) 89:301-4 Ja '15  
 Steel frame passenger equipment with wood finish; new Grand Trunk suburban cars. *Il diag* *Ry Ago* 58:753-5 Ap 2 '15; *Same*. *Ry Ago* (Mech ed) 89:174-8 Ap '15  
 To find maximum overhang of car on curve at platform. L. C. Jordan. *diag* *Ry R* 71:340 Mr 13 '15  
 U. S. Bureau of standards test weight car no. 2. *Il Ry R* 57:483-4 O 16 '15  
 Upkeep of railway carriages. *Engineer* 120:171-3 Ag 20 '15  
 Use of current for operating crane to remove trucks from under car bodies. R. E. Hewitt. *Il Elec Ry J* 46:638 S 25 '15  
 Veneered steel for interior finish of passenger cars, Canadian Pacific Ry. *Il Ry R* 56:724 D 13 '14; *Same*. *Ry Ago* 57:1087-8 D 11 '14  
*See also* Air brakes; Automobiles; Baggage and express cars; Bath cars; Brake beams; Brake shafts; Buffet cars; Car cleaning; Car couplings; Car heating; Car houses; Car lighting; Car painting; Car roofs; Car trucks; Car wheels; Chapel cars; Draft gears; Dynamometer cars; Electric railroads—tolling stock; Freight car service; Freight cars; Hospital cars; Motor cars (railroad); Refrigerator cars; Sleeping cars; Street cars; Tank cars

**Bearings**

Ball bearings on electric railway cars; abstract. R. Zehnder-Spoerry. *diag* *Am Soc M E J* 37:230-1 Ap '15  
 Economics of the light car and of ball bearings. A. V. Farr. *Elec Ry J* 46:230-40 Ag 7 '15  
 Lubrication of car journals. W. A. Clark. *Ry Ago* (Mech ed) 89:19-20 Ja '15  
 Need of standard railroad car-bearing alloy. R. L. Clarke. *Foundry* 43:467-8 N '15  
 Street railway service being inaugurated in Miami, Fla., with storage-battery cars. *Il diag* *Elec Ry J* 46:920-1 O 30 '15  
 Use of ball bearings on Swedish railways. *diag* *Ry R* 56:600 My 1 '15

**Cleaning**

*See* Car cleaning

**Disinfection**

Disinfectant arrangement for passenger cars. *diag* *Ry Ago* (Mech ed) 89:466-7 S '15

**Painting**

*See* Car painting

**Repair**

Car maintenance on a definite cost basis. K. C. Schluss. *Elec Ry J* 46:568-9 S 18 '15  
 Car maintenance on the San Francisco-Oakland terminal railways. G. St. Pierre. *Il diag* *Elec Ry J* 46:527-30 S 18 '15  
 Compensation for car repairs; Master car builders' association committee report. *Ry R* 56:835-6 Ja 19 '15  
 Maintenance of 1600-volt d. c. cars by the Southern Pacific company. E. Sears. *Il Elec Ry J* 46:551-4 S 18 '15  
 Maintenance of 1200-volt d. c. cars by the Oregon electric railway. D. L. Clough. *Il Elec Ry J* 46:555-6 S 18 '15  
 Maintenance of 1200-volt d. c. cars by the Southern Pacific company. R. E. Hewitt. *Il Elec Ry J* 46:546-8 S 18 '15  
*See also* Railroads—Shops

**Ventilation**

*See* Car ventilation

**Cars, Caboose**

Eight-wheel caboose with steel underframe. E. E. Glynn. *Il diag* *Ry Ago* (Mech ed) 89:231-3 My '15  
 Erie caboose with steel center sills. *Il diag* *plan Ry Ago* (Mech ed) 89:25-8 Ja '15  
 Steel frame caboose, Buffalo, Rochester & Pittsburgh Ry. *Il diag* *Ry R* 56:270-2 F 27 '15  
 Steel frame double truck caboose, Buffalo, Rochester & Pittsburgh. *Il diag* *plan Ry Ago* (Mech ed) 89:301-1 Ja '15

**Cars, Chapel.** *See* Chapel cars

**Cars (derrick)**

Derrick car for elevated-railway reconstruction. J. M. Ryan. *Il diag* *Eng N* 73:986-7 My 20 '15

Seventy-nine-ton derrick car lowers track 50 feet in twenty-five minutes. A. S. Beale. *Il Eng Rec* 72:78-9 J 17 '15

**Cars, Dining.** *See* Dining cars

**Cars, Freight.** *See* Freight cars

**Cars, Hospital.** *See* Hospital cars

**Cars (inspection)**

Conducting track inspection on the Grand Trunk. *Il Ry Ago* 57:1115-7 D 18 '14

**Cars, Kitchen.** *See* Kitchen cars

**Cars (line)**

Pillar crane car for track work. E. M. T. Ryder. *Il Elec Ry J* 46:763 Ap 17 '15  
 Three-in-one car. E. C. Sherwood. *Il diag* *Elec Ry J* 46:121-3 Ja 12 '15

**Cars, Military**

New war cars for our army. *Il Sci Am* 113:38 J 31 '15

**Cars, Refrigerator.** *See* Refrigerator cars

**Cars (section)**

Efficiency of motor cars for section forces. G. R. Morrison. *Ry Ago* 56:227 S 8 '15; *Same*. *Ry R* 57:346-6 S 11 '15

**Cars (spreader)**

Improvements in bank spreader cars. *Ry R* 56:134 Mr 27 '15

**Cars, Steel**

All-steel cars for London & Port Stanley railway. *Il Elec Ry J* 46:27-8 J 1 3 '15  
 All-steel one-man car. *Il Elec Ry J* 46:72 3 J 10 '15  
 All-steel passenger cars for the Pacific electric railway. E. E. Small. *Il diag* *Elec Ry J* 46:488-92 S 18 '15  
 American steel cars built for Russian railways. *Il Eng N* 74:951 N 11 '15  
 Analysis of stresses in Chicago elevated steel car. H. A. Johnson. *diag* *Elec Ry J* 44:1799-1800 D 12 '14  
 British all-steel kitchen cars. *Il diag* *Ry Ago* (Mech ed) 89:178-82 Ap '15  
 Center-entrance cars for suburban service. *Il plan* *Elec Ry J* 46:282-4 Ag 14 '15  
 Considerations affecting the type of center sills in steel passenger equipment. L. K. Milcox. *diag* *Ry Ago* (Mech ed) 89:227-31 My '15

**Cars, Steel—Continued**

- Design and operation of the new shop for building steel freight and passenger cars of the Canadian Pacific Ry., at Montreal. L. C. Ord. *ii* diag plan Eng & Contr 42:406-11 O 28 '14
- Design of steel passenger equipment. V. W. Zillen. *diag* Ry Age (Mech ed) 89:459-61, 515-16 S-O '15
- Jersey Central steel baggage and mail equipment. *ii* diag Ry Age 58:301-4 F 19 '15; Same. *Ry* Age (Mech ed) 89:123-7 Mr '15
- Jersey Central steel passenger cars. *ii* diag plan Ry Age (Mech ed) 88:635-9 D '14
- Light-weight car for Cleveland & Eastern traction company. *ii* Elec Ry J 46:30-1 J1 3 '15
- Light-weight steel interurban car of the Toledo, Fostoria & Findlay railway. *ii* plan Elec Ry J 45:947-8 My 15 '15
- Long Island railroad adopts light, steel trailers. *ii* diag Elec Ry J 46:136-8 J1 24 '15
- Long Island steel suburban cars. *ii* diag *Ry* Age (Mech ed) 89:103-6 Ag '15; Same. *Ry* Age 59:241-4 Ag 6 '15
- New subway and elevated car of the New York municipal railway corporation. *ii* diag *Ry* J 56:208-13 F 13 '15
- Northern Pacific passenger cars. *ii* diag *Ry* Age (Mech ed) 89:517-22 (1) '15; Same cond. *Ry* Age 59:733-7 O 22 '15
- Plant for sandblasting steel cars. *diag* *Ry* Age 59:397-8 Ag 27 '15; Same. *Ry* Age (Mech ed) 89:427-8 Ag '15
- Pressed-steel cars for the Chicago elevated. *ii* diag Elec Ry J 44:1234-9 D 5 '14
- Railway safety and railway economies. *Sci* Am 112:46 Jan 9 '15
- Riveting in steel car construction. H. A. Hatfield. *ii* diag *Ry* Age (Mech ed) 89:33-6, 87-90 Jan-F '15
- Sand blasting steel cars. *diag* *Ry* Age (Mech ed) 89:376-7 J1 '15; Same cond. *Ry* Age 59:104-5 J1 16 '15
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- Aggregate mechanically handled from pit to road. *Il Eng Rec* 72:133-4 J 31 '15  
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 Two new Randall railway dry docks. *Il* *Int* *Marine* *Eng* 20:160-7 *Ap* '15  
*See also* Freight handling; Harbors; Ports; Wharves

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- Concrete dome for the new Technology buildings, Cambridge, Mass. *Il* *Eng* *N* 74:385-6 *Ag* 26 '15  
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 Octagonal framed dome, San Francisco auditorium. *Il* *diag* *Eng* *N* 73:773-5 *Ap* 22 '15  
*See also* Roofs

**Domestic appliances**

- Domestic fuel appliances from the consumer's point of view. *Am* *Gas* *Light* *J* 102:70-1, 74-6 *F* 1 '15

*See also* Gas appliances**Domestic engineering**

- Science of domestic engineering. T. J. Claffy. *Dom* *Eng* 70:7-8 *Ja* 2 '15

*See also* Building; Heating; Lighting; Plumbing; Sanitary engineering; Ventilation**Domestic engineering (periodical)**

- 25th anniversary of Domestic engineering. J. K. Allen. *Dom* *Eng* 69:885-8 *D* 26 '14

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- Minerals of Santo Domingo. F. L. Garrison. *Il* *Eng* & *Min* *J* 99:641-4 *Ap* 10 '15

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- Electric control for doors. *Il* *Elec* *W* 68:1049 *N* 6 '15  
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- Colonial architecture in Connecticut. W. S. Russell. *Il* *diag* *Arch* *Rec* 38:672-80 *D* '15  
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- Feasibility of continuous causticizing. *Il* *Met* & *Chem* *Eng* 13:514-15 *Ag* '15  
 Use of hydrometallurgical apparatus in chemical engineering. J. V. N. Dorr. *Il* *J* *Ind* & *Eng* *Chem* 7:129-30 *F* '15; *Same*. *Met* & *Chem* *Eng* 13:97-8 *F* '15

**Dorr classifier**

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- Arizona copper co.'s Dorr thickener. D. Cole. *Il* *diag* *Eng* & *Min* *J* 100:131-4 *J1* 24 '15  
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**Double houses**

- Double house for a 50 ft. lot. *Il* *plans* *Ind* *Ag* 37:42-4 *N* '15

**Douglas fir**

- Distillation of Douglas fir at high temperatures. R. Tremper. *J* *Ind* & *Eng* *Chem* 7: 926-7 *N* '15  
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 Protest against condemnation of treated Douglas fir. E. M. Horrocks. *Eng* *Rec* 71:107 *Ja* 23 '15

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- Air intakes increase furnace capacity. *diag* *Rec* *Age* 57:41-2 *S* 25 '15  
 Draft in furnaces and flues. E. C. Bailey. *diag* *Power* 42:638-42 *N* 9 '15  
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 Measurement of draft. C. F. Hirschfeld. *diag* *Power* 42:370-2 *F* 14 '15  
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*See also* Chimneys; Dampers; Firing; Locomotives—Draft; Mechanical draft; Mine ventilation; Ventilation

**Draft, Mechanical. See Mechanical draft****Draft gages**

- Ellison combination differential draft gage. *Il* *Power* 41:229 *F* 16 '15  
 Recording power plant operations. J. C. Smallwood. *Il* *diag* *Eng* *M* 50:41-3 *O* '15

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- Cost of maintenance of equipment: a record of the Waugh draft gear. *Ity* 11 56:66-7 Jan 9 '15  
 Draft gear problem. *It*, V. Crandall. *Ity* Age (Mech ed) 88:612-13 D '14  
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 Friction spring draft gear. *diag* *Ity* Age 58: 832 Ap 16 '15  
 New York municipal car--draft gear. *diag* *Ity* J 44:1380-1 D 28 '14  
 Record of cost of maintaining car draft appliances. *Ity* 11 56:291 F 27 '15

**Draft tubes. See Turbines****Drafting boards**

- Drafting table for fieldwork. *C. P. Bernard*. *It* Eng & Min J 100:304 S 4 '15  
 Field drafting table. *W. L. Webb*. *diag* *Eng* N 73:828 Ap 29 '15  
 Method of holding long drawings. *J. B. Nelson*. *diag* *Mach* 22:53 S 15  
 Simplex parallel attachment. *It* *diag* *Mach* 21:102-2 Ar '15

**Drafting instruments. See Drawing instruments****Drafting room practice**

- Automobile drafting room. *E. W. Weaver*. *It* *diag* *Automobiles* Age 31:222-4, 256-8, 297-8, 332-5, 368-70 Ag 5-8 S 2 '14  
 Camera, vs. the pantograph. *H. A. Williamson*. *diag* *Colliery* 35:288-91 Jan '15; *Excerpt*. *Eng* M 48:901-3 Mr '15  
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 Sectional views of ribs and symmetrical parts. *C. L. Svensen*. *diag* *Mach* 21:790-1 Jo '15  
*See also* Drawing instruments; Machinery—Design; Mechanical drawing

**Drafts**

- Cheques and drafts. *S. Walton*. *J Account* 20: 230-3 S '15

**Draftsmen**

- Underrated contributor to steel construction: the detailer. *H. Fleming*. *Eng* N 71:653-1 S 30 '15

**Drain tile**

- Advertising and selling methods for concrete drain tile manufacturers. *J. J. Commons*. *Concrete Cem* 7:27-8 J1 '15  
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 Size of drain tile as determined by Maryland experience. *J. R. Haswell*. *Eng & Contr* 44:60 J1 21 '15  
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 Tile drains instead of small culverts on highways. *E. O. Nelson*. *Eng* N 73:1083-4 Jo 3 '15

**Drainage**

- Combination concrete road and flood channel. *Los Angeles county, Calif.*. *It*, R. Bennett. *It* *diag* *Eng* N 73:42-3 Ja 7 '15  
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 Cost of drainage pumping in southern Louisiana. *C. W. Okey*. *Eng* N 74:788-5 O 14 '15  
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 Ditch digging by blasting. *F. W. Wilson*. *It* *Eng* & Contr 44:160 Ag 25 '15

- Drainage pumping plant with variable-speed drive. *It* *diag* *Eng* N 74:581-3 S 23 '15  
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 East side levee and sanitary district. *T. N. Jacob*. *It* *diag* *Assn Eng Soc* J 55:1-11 J1 '15  
 Excavating machinery used in land drainage. *D. L. Yarnell*. *bibliog* *It* *diag* *U S Agric Bul* 300:1-39 '15  
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 How Carson lake was drained. *H. C. Westep*. *map* *Iron Tr* R 56:128-9 Jan 14 '15  
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 Method and cost of making a drainage survey for the Washington Bayou drainage district, Mississippi. *C. W. Mellin*. *map* *Eng & Contr* 44:92-5 Ar 4 '15  
 Method of computing run-off in draining irrigated lands. *H. C. Miller*. *Eng & Contr* 44: 150-1 Ag 25 '15  
 New type of gate for regulating adjacent water levels operates automatically. *diag* *Eng Rec* 71:301-3 Mr 6 '15  
 Novel method of draining a swamp for an earth fill. *It* *Eng* N 71:897 N 4 '15  
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 Reducing the cost of drainage excavation. *Eng Rec* 70:693-4 D 26 '14  
 River improvement for public health reclaiming 10,000 acres of fertile land. *It*, W. Sherman. *It* *map* *Eng Rec* 71:738-9 Jo 12 '15  
 Unwatering Carson lake. *It*, L. D. Davenport. *It* *map* *Eng & Min J* 98:1065-70 D 19 '14  
 Why drainage of irrigated lands is necessary, and how the problem is handled. *D. W. Murphy*. *It* *Eng Rec* 72:356-8 J1 10 '15; *Abstract*. *Eng* M 50:464-5 O 1 '15  
*See also* Drain tile; Irrigation; Mine drainage; Roads—Drainage; Sewerage

**Drainage, House**

- Modern design in house drainage systems. *A. J. McDonald* and *W. H. Cramer*. *diag* *Metal Work* 83:769-71 My 28 '15

**Draughting room practice. See Drafting room practice****Drawbacks**

- More liberal drawback laws required. *Eng* W 65:254 Jan 23 '15

**Drawbridges**

- Automatic drawbridge signal. *diag* *Eng Rec* 70:690 D 19 '14  
 Canadian Pacific draw span over the Lachine canal. *It* *Ity* Age 59:239 Ag 6 '15  
 Center bearing, machinery and gates. *Congress street swingbridge*. *Troy*. *N. Y.* *diag* *plan* *Eng* N 73:804-5 Ap 29 '15  
 Congress street bridge across the Hudson river at Troy, N. Y.; structural features. *It*, W. Hodge. *diag* *Eng* N 73:574-5 Mr 25 '15  
 Design, construction and detailed costs of the Richelieu river bridge, Lacolle Junction, Quebec. *It* *diag* *Eng & Contr* 42:542-6, 585-9 D 2, 23 '14  
 Double-dock swingbridge floated in place. *It* *Eng* N 74:487 S 2 '15  
 Draw span of Harlem river bridge floated to place. *It* *Eng Rec* 72:258-9 S 4 '15  
 Electricity in construction of new Portland, Me., bridge. *Eng* *It* & *W* *Eng* N 67:229 Ag 7 '15  
 Energy required for turning a 310-ft. bridge across the Harlem river. *It* *Eng* W 68:567 O 18 '15  
 New bridge of the Chicago, Burlington & Quincy R. R. over the Missouri river at Kansas City, Mo. *diag* *Eng & Contr* 44:170 S 1 '15

**Drawbridges—Continued**

- New swing bridge over the Nile at Cairo. *Il* diags Engineer 120:270-2, 274 S 17 '15  
Removable fixed bridge. *Il* Eng N 73:1326-7 Je 24 '15  
Renewing heavy swing span by floating into place; old North Western bridge in Milwaukee removed and new span weighing 800 tons placed in one day. *Il* plan *Ry* Ago 58:836-8 Ap 16 '15

*See also* Bridges, Bascule; Bridges, Lift

**Drawing**

*See also* Architectural drawing; Design, Decorative; Geometrical drawing; Mechanical drawing; Perspective; Topographical drawing

Drawing, Mechanical. *See* Mechanical drawing

Drawing, Topographical. *See* Topographical drawing

**Drawing Instruments**

- Combination drafting instrument. *Il* Iron Age 95:1402 Je 24 '15  
Involute gear tooth forming device; simple method of laying out a template or forming cutter. *G. Luck*, diags Mach 21:716-17 My '15

Drawing room practice. *See* Drafting room practice

**Dredges**

- Dredges and dredging operations. *Int* Marine Eng 20:238-9 Je '15  
Electric hydraulic dredge for Chuyahoga river improvements. *Il*, *Flora*, *Il* Eng & Contr 43:110-11 F 3 '15; *Same*, *Int* Marine Eng 20:245-6 Je '15  
Electric suction dredge with special cutter for gumbo. *Il* Eng N 73:220-1 F 4 '15  
Electrically operated hydraulic dredge. *Eng* N 73:889 My 6 '15; *Il* *Int* Marine Eng 20:261-2 Je '15  
Flume-type elevator dredges in Alaska. *L. H. Eddy*, *Il* Eng & Min J 99:1120-30 Je 26 '15  
42-inch hydraulic dredge *Foyers*. *Il* *Int* Marine Eng 20:256-7 Je '15  
Four-yard government dipper dredges. *Il* *Int* Marine Eng 20:247-9 Je '15  
Government dredges for improving the Arkansas river. *Il* *Int* Marine Eng 20:252-3 Je '15  
Latest United States dredges. *P. M. Bruner*, *Il* *Int* Marine Eng 20:240-3 Je '15  
Most powerful dipper dredge in the world: Gamboa and Paraiso. *Il* *Int* Marine Eng 20:254-5 Je '15  
Pump and cutter of electric dredge. *Il* Eng N 73:1079 Je 3 '15  
Recent Mallett pipe line and sea-going hydraulic dredges. *Il* *Int* Marine Eng 20:253-4 Je '15  
Reconstruction of U. S. dredge *Barnard*, *J. H. Peyton*, *Il* *Int* Marine Eng 20:244 Je '15  
Semi-Diesel engines and locomotives for Alaskan dredges. *Il* Eng & Min J 99:644 Ap 10 '15  
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10-yard dipper dredges on the Cape Cod canal. *Il* *Int* Marine Eng 20:255-6 Je '15  
Twin-screw bucket ladder dredge and a single-screw hopper barge for Tasmania. *P. C. Coleman*, *Il* *Int* Marine Eng 20:250-1 Je '15  
Typical ships. *Il* plan (supp) Engineer 118:573-5 D 18 '14

*See also* Snag boats

**Dredging**

- Cost data on the work of improving the Napomnet river in Massachusetts. *R. M. Blake*, *Il* Eng & Contr 43:34-6 Ju 13 '15  
Cost of electric dredging for land reclamation, San Diego, Cal. *L. L. W. Allison*, Eng & Contr 44:96-6 Ag 4 '15  
Dredge dipper rigged as drag. *O. S. Proctor*, *Il* Eng Rec 71:119-20 Ja 23 '15  
Dredging sudd on the river Nile. *Il* Eng N 73:513-14 Mr 18 '15  
Dredging work on the Panama canal slides. *W. G. Comber*, *Il* maps Eng N 73:753-7 Ap 22 '15  
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Resulting dredged areas in Victoria. Eng & Min J 98:1136-7 D 26 '14

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Annual convention, Chicago, July 13-15. Heat & Ven 12:46-7 Ag '15

33d annual convention, Chicago, July 13-15. Metal Work 84:121-9 Jl 23 '15

33d annual convention; with account of Des Moines and Salt Lake City indictments, list of delegates, etc. Dom Eng 72:59-79 Jl 17 '15

**National association of master steam and hot water fitters**

Annual convention, Milwaukee, June 21-24. Metal Work 84:24-8 Jl 2 '15

27th annual convention, Milwaukee, June 21-24. Dom Eng 71:372-5 Je 26 '15

27th annual convention, Milwaukee, June 21-24, 1915. Heat & Ven 12:35-40 Jl '15

**National association of railway commissioners**

Annual meeting, San Francisco, Oct. 12-16. Ry Age 59:789 O 22 '15

27th annual convention, San Francisco, Oct. 12-16. Elec W 66:961 O 30 '15

**National association of scale experts**

11th semi-annual meeting at Chicago, Ill. Ry Age 58:269-70 F 12 '15

**National association of sheet metal contractors**

11th annual convention, Denver, June 7-11. Metal Work 83:890-8 Je 18 '15

Trade development committee meeting, Chicago, Nov. 12. Metal Work 84:880-1 N 19 '15

- National association of stationary engineers**  
33d annual convention, Columbus, O., Sept. 13-18. Power 42:462-3 S 28 '15
- National association of stove manufacturers**  
Convention, New York city, May 12-13. Metal Work 88:746 My 21 '15
- National association of wool growers**  
51st annual meeting at Salt Lake City, Nov. 12-14, 1914. Textile World 48:283-6 D '14
- National association of woolen and worsted overseers**  
List of members present at 32d annual meeting. Textile World 48:362-3 D '14  
33d semi annual meeting, Rocky Point, R. I., May 15. Textile World 49:391-2 J '15
- National automobile chamber of commerce**  
Chamber of commerce to defend Kardo patents suit. Horseless Age 34:339-30 D 9 '14
- National cash register company**  
Modern plating practice: a piecework system as used by the National cash register company. W. Fraire. II Metal Ind n s 13:1-4 Ja '15  
Research work at the National cash register company. H. G. Dorsey. II Sibley J 29:115-21 Ja '15
- National characteristics**  
Random reflections. Sci Am 112:326+ Ap 3 '15
- National civic federation**  
15th annual meeting. Elec R & W Elec'n 65:1142 D 12 '14  
Governmental versus private enterprise discussed. Elec W 64:1140-1 D 12 '14
- National commercial gas association**  
Minneapolis convention. Am Gas Light J 101:360-1, 377 D 7-14 '14
- National conference on city planning**  
Seventh conference in Detroit, June 7-9. Eng N 73:1190 Je 17 '15
- National district heating association**  
7th annual convention, Chicago, June 1-3. Dom Eng 71:285-7 Je 5 '15; Elec R & W Elec'n 66:1117-20 Je 12 '15; Elec W 65:1576-7 Je 12 '15; Heat & Ven 12:37-46 Je '15; Metal Work 83:353-5 Je 11 '15; Power 41:801-3 Je 22 '15
- National electric light association**  
Commercial section plans. Elec W 66:446-7 Ag 28 '15  
Constructive work before the N. E. L. A. H. H. Scott. Elec W 65:5-6 Ja 2 '15  
Convention, San Francisco, June 8-11. Elec Ry J 45:1106-9 Je 12 '15  
Future work of N. E. L. A. E. W. Lloyd. Elec W 66:155-6 JI 17 '15  
Meetings of N. E. L. A. executive committee. Elec W 65:186-7, 695-6; 66:906 Ja 16, Mr 13, O 23 '15  
N. E. L. A. rules to harmonize service requirements for motors. Elec W 66:93 JI 10 '15  
38th annual convention, San Francisco, June 7-11; abstracts of papers and reports. Power 41:858-60 Je 22 '15  
38th convention; abstracts of papers and reports. Elec R & W Elec'n 66:1107-13 Je 12 '15  
38th convention, San Francisco: abstracts of papers and discussions. Elec W 65:1502-34 Je 12 '15  
38th convention, San Francisco, June 8-11. Elec R & W Elec'n 66:1095-1104 Je 12 '15
- National electric light association, Iowa section**  
15th annual convention, Keokuk, April 20-22. Elec R & W Elec'n 66:816-30 My '15
- National electric light association, Michigan section**  
4th annual convention, June 26-30. Elec R & W Elec'n 67:27-30 JI 3 '15  
4th annual convention, June 26-30. Elec W 66:108-9 JI 10 '15
- National electric light association, New England section**  
New England question box convention. Elec R & W Elec'n 66:537-40, 598-600 Mr 20-27 '15  
New England section 7th annual convention. Elec R & W Elec'n 67:577-83 S 25 '15  
New England section 7th annual convention, Kineo, Me., Sept. 14-17. Elec W 66:680-1 S 25 '15
- National electric light association, Southeastern section**  
Southeastern section annual convention, Asheville, N. C., Sept. 22-24. Elec W 66:738-7 O 2 '15
- National electrical code**  
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- National electrical contractors' association**  
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15th annual convention, San Francisco, July 21-24. Elec R & W Elec'n 67:202-4 JI 31 '15
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Conference on safety code. Elec W 66:956-7 O 30 '15  
Criticism. C. L. S. Tingley. Elec Ry J 45:845 My 1 '15  
Defense of the Safety code. E. B. Rosa. Elec Ry J 45:939-41 My 15 '15  
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Opinions. C. L. Cadle; J. H. Hanna. Elec Ry J 45:1036 My 29 '15  
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Proposed rules formulated by the Bureau of standards. E. B. Rosa. Elec W 65:845-7 Ap 3 '15  
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Wisconsin considers safety rules. Elec W 66:959-60 O 30 '15
- National exposition of chemical industries**  
First exposition at the Grand Central palace, New York city, Sept. 20-25. Textile World 50:67-9 O 15 '15  
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Program and list of exhibitors. Met & Chem Eng 13:574 S 1 '15  
Summary of exhibits and lists of papers read at first exposition. II Met & Chem Eng 13:690-700 O 1 '15  
Technical society meetings and lectures. Met & Chem Eng 13:629 S 15 '15
- National fire protection association**  
19th annual convention, New York, May 11-13. Elec W 65:1264-5 My 15 '15  
19th annual convention, New York, May 11-13. Eng Rec 71:667 My 22 '15
- National foreign trade convention, 2d**  
Export movement set forward at St. Louis. Iron Age 95:248-51+ Ja 23 '15  
Meeting at St. Louis, Jan. 21 and 22, 1915. Elec W 65:253-4 Ja 23 '15
- National forests.** See Forest reserves
- National founders' association**  
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- National garage association**  
Growth of the National garage association. Horseless Age 35:634-5 My 12 '15

- National guard (United States).** See United States—Militia
- National hardware association**  
Manufacturers and distributors of tin plate and sheet metal discuss business conditions. Metal Work 83:784-5 My 28 '15
- National independent telephone association**  
18th annual convention, Chicago, February 3 to 6. Elec R & W Elec'n 66:805-8 F 13 '15
- National industrial traffic league**  
Annual meeting, Chicago, Nov. 17-18. Ry Age 59:1004 N 26 '15
- National machine tool builders' association**  
13th semi-annual convention, Atlantic City, May 20-21. Iron Age 95:1173-8 My 27 '15  
14th annual convention, New York, Oct. 28-29. Iron Age 96:1060-3 N 4 '15  
14th annual convention, New York, Oct. 28-29. Iron Tr R 57:906-8 N 4 '15  
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- National metal trades association**  
Annual meeting in New York, April 14-15. Iron Age 95:890-3 Ap 22 '15  
17th annual convention, New York, April 14-15. Mach 21:769 My '15  
Steady progress in co-operation as indicated by reports at the annual convention of the National metal trades association. Iron Tr R 56:825-30 Ap 22 '15
- National municipal league**  
20th annual convention, Baltimore, Nov. 18-20, 1914. Munic J 87:812 D 3 '14
- National parks**  
Canada  
Parks in the Canadian Cordillera. J. A. Allan. Il Sci Am S 80:360-2 D 4 '15  
United States  
United States will capitalize its scenery. Il Eng Rec 72:568-70 N 6 '15  
See also Forest reserves; Rocky mountain national park; Yellowstone national park
- National pipe and supplies association**  
Annual convention, with list of those in attendance. Dom Eng 71:229-31 My 22 '15
- National plumbing code.** Need of. F. J. Hanley. Dom Eng 72:176-8 Ag 7 '15
- National rivers and harbors congress**  
11th annual convention, Washington, Dec. 9-11, 1914. Eng Rec 70:sup295-6 D 19 '14
- National road.** See Cumberland road
- National safety council**  
Annual congress; railroad section. Ry Age 59:813-16 O 29 '15  
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4th annual congress, Philadelphia, Oct. 19-21. Elec R & W Elec'n 87:804-5 O 30 '15  
Fourth congress, Philadelphia, Oct. 19-21. Elec Ry J 46:906 O 30 '15
- National scrap iron and steel association**  
Scrap dealers: perfect national organization. Iron Tr R 56:281 Ja 28 '15
- National security league**  
Naval and military exhibit of the National security league. Il Sci Am 112:626 Je 26 '15
- National silk convention**  
First national silk convention, Paterson, N. J., Oct. 12-14. Textile World 50:191-6 N '15
- National supply and machinery dealers' association**  
Annual convention, Philadelphia, June 3-4. Iron Age 95:1290-3 Je 10 '15  
Meeting, New York, Oct. 28. Iron Age 96:1101-3 N 4 '15  
Meeting, New York, Oct. 28. Iron Tr R 57:908-9 N 4 '15
- National tube company**  
Panama-Pacific exposition. Il Power 42:586-8 O 26 '15
- National warm air heating and ventilating association**  
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Discussion on warm air heating. Metal Work 83:335-6 F 28 '15
- Regulating warm air furnace practice: tentative recommendations for a standard of procedure.** Metal Work 83:646-8 Ap 30 '15
- Natural gas.** See Gas, Natural
- Natural history museums.** See American museum of natural history; Field museum of natural history
- Natural resources**  
See also Forests and forestry; Mineral lands: Mines and mineral resources; Water power
- Natural steam.** See Steam, Natural
- Naval advisory board.** See United States—Naval consulting board
- Naval architects and marine engineers, Society of.** See Society of naval architects and marine engineers
- Naval architecture**  
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- Deckhouses**  
Scantlings on light superstructures; with discussion. J. Montgomery. Engineer 119:334-5 Ap 2 '15
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Water-tight subdivision of ships. J. J. Welch. Engineer 119:318-19; Discussion. 119:800 Mr 26 '15
- Naval art and science**  
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Naval artillery. See Naval guns

# Naval battles

Action in which the *Carmania* sank the *Cap Trafalgar*. *Il Sci Am* 111:449 D 5 '14

Battle of the North sea. *Il Sci Am* 112:136-7 F 6 '15

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Wrecking of the cruiser *Emden* by shell fire. *Il Sci Am* 113:376 O 30 '15

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More military and naval academies. R. S. Spear. *Sci Am* 113:9 JI 3 '15

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Naval gunnery. See Gunnery

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Fifteen-inch versus fourteen-inch naval guns. S. L. Sayre. *Sci Am* 113:181 Ag 28 '15

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Suction between passing ships. S. A. Reeve. *diags Sci Am* S 79:30-2, 46-8, 62-4 Ja 9-23 '15

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## Diseases

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Insects' nests. *Il Sci Am* S 80:212-13 O 2 '15

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# Nevada

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United States dreadnought Nevada. *Il Sci Am* 113:424 N 13 '15

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## Coast

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2d quarterly meeting, Paterson, Oct. 30. *Metal Work* 84:598-7 N 5 '15

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**Wharves**

Connecticut shipping terminal at New London. W. E. Clarke. II diag Eng N 74:1028-32 N 25 '15

**New Mexico****Antiquities**

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Meerschaum deposits of New Mexico. F. V. Bush. II map Eng & Min J 99:941-3 My 29 '15

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**Hurricane, 1915**

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Cotton warehouse and terminal at New Orleans. diag Eng N 73:1217 Je 24 '15

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Causeway at New Philadelphia, Ohio. E: Stin-gel. II diag Eng Rec 71:78-9 Ja 16 '15

**New York (city)**

City planning in Queens borough, New York. F. B. Tucker. map Eng N 74:638-41, 689-91 S 30-O 7 '15

Plan for the improvement of Hell Gate, East river. C. D. Ward. map Sci Am 112:432 My 8 '15

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Circle building, New York. II plan Arch & Bldg 47:282-8 Ag '15

*See also* Equitable building; Morgan building; Woolworth building

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Draw span of Harlem river bridge floated to place. II Eng Rec 72:298-9 S 4 '15

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Erection at Hell Gate arch checks calculations. II Eng Rec 72:220-1 Ag 21 '15

Erection of the world's greatest steel bridge at Hell Gate. II Iron Tr R 57:944-5 N 11 '15

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Yale club's new house. M. Wilcox. II plans Arch Rec 38:310-42 S '15

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- United States mining statutes annotated. J. W. Thomson. *U S Bur Mines Bul* 94:pt 2, 1063-73 '15

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- Method of lining wrought, steel and cast iron pipe with cement. *diag Eng & Contr* 42:547-8 D 9 '14

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- Convenient control for Crane company pipe machine. *diags Iron Tr R* 57:691 O 7 '15
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- Repairing leaks and breaks. J. E. Noble. *diags* Power 40:818 D 8 '14; Same. *Eng & Min J* 98:1099 D 19 '14

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- Description of a pipettometer. W. D. Frost. *diag* *Am Chem Soc J* 36:1785-7 Ag '14

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- New Morrison hotel plant, Chicago. T. Wilson. plan *Power* 42:71-3 J 20 '15
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## Railroads

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## Specimens

Announcements and invitations. Inland Ptr 55: 656a-656h Ag '15  
 Department of reset designs. Inland Ptr 56: 64a-64h O '15  
 Reset specimens. Inland Ptr 55:352a-352h Je '15  
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 Suggestions for cards and tickets. Inland Ptr 54:800a-800h Mr '15

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Learning the printing trade in a newspaper office. W: H. Seed. II Inland Ptr 56:243-6 N '15

## China

Commercial press, limited, Shanghai, China. W: H. Seed. II Inland Ptr 56:373-5 D '15

## France

Literature of typography. H: L: Bullen. Inland Ptr 54:537-9, 616-8 Ja-F '15

## Great Britain

Literature of typography. H: L: Bullen. II Inland Ptr 54:797-9; 55:60-2, 492-6; 56:60-4, 845-51 Mr-Apr. JI, O, D '15

## India

Printing in India. Inland Ptr 56:194-5 N '15

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Composing-machines and cost-accounting. C: J. Schott. Inland Ptr 56:54 O '15

Monotype accounting problems. C. D. Bolinger. Inland Ptr 55:478-5 JI '15

## Costs

Cost and method. B. Daniels. See monthly numbers of Inland printer

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## Estimates

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Faculty of judgment. G. D. Crain, jr. Inland Ptr 55:338-5 D '15

How much profit? B. Daniels. Inland Ptr 55: 801-2 S '15

How to study an estimate. B. Daniels. Inland Ptr 55:567-8 Ag '15

## Imposition, etc.

Handy rule-case for the make-up. II Inland Ptr 56:402 D '15

## Presswork

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Old Bill on the make-ready problem. A. J. Clark. Inland Ptr 54:337-40 D '14

Position of forms on pattern presses. F. L. Bush. Inland Ptr 55:766-7 S '15

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Distribution of white space. J. L. Frazier. Inland Ptr 55:355-8 D '15

Lesson in spacing. J. L. Frazier. Inland Ptr 56:353-4 D '15

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Devices for automatically numbering checks, bonds, tickets, tags, etc., while being printed. Inland Ptr 54:344 Mr '15

Disposal of secondhand printing-office machinery. H. De Lisle. Inland Ptr 54:487-9 Ja '15

Electricity in magazine publishing. II Elec R & W Elec'n 66:105-7 Ja 16 '15

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Use of electricity in a newspaper plant; motor and control equipment for production of New York times. II Elec W 65:1637-31 Je 19 '15

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Chew printing house, Camden, N. J. II plans Brickb 24:11-12 Ja '15

Commercial press, limited, Shanghai, China. W: H. Seed. II Inland Ptr 56:373-5 D '15

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 Railroad built around burning tunnel in three weeks. *il Eng Rec 71:797 Je 26 '15*  
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- Calculations showing economy of constructing the Rogers Pass tunnel. *J. G. Sullivan. diags Eng & Contr 44:398-400 N 17 '15*  
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- Cobb shockless railroad crossing. *il Ry Age 58:1085-6 My 21 '15*  
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- Effect of recent floods on railways. *il Ry Age 59:729-32 O 22 '15*

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- Development of Long Island. *H. B. Fullerton. Ry Age 57:1040-1 D 4 '14*  
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- Steel, Heat treatment of**  
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## Tunnels and tunneling

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**Water heating**

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